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Municipal Water Quality
Investigations Program

1997
Compendium of
Water Quality Investigations
in the
Sacramento River Watershed,
Sacramento-San Joaquin Delta,
and
San Francisco Bay Area

August 1998

DEPARTMENT OF WATER RESOURCES

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SEP 28 1998



To: Interested Parties

Subject: Release of the 1997 *Compendium of Water Quality Investigations in the Sacramento River Watershed, Sacramento-San Joaquin Delta, and San Francisco Bay Area*

Enclosed is the 1997 *Compendium of Water Quality Investigations in the Sacramento River Watershed, Sacramento-San Joaquin Delta, and San Francisco Bay Area*. This report presents information submitted by federal, State, and local agencies on water quality monitoring programs that they conduct. It contains maps of sampling sites along with information about parameters monitored, frequency of monitoring, methods of sampling and analysis, compliance standards, and sources of additional information for 54 programs in the study area.

This report updates the 1993 *Compendium of Water Quality Investigations in the Sacramento-San Joaquin Delta* by including additional programs in the Sacramento-San Joaquin Delta study area. It also expands the study area to cover the Sacramento River watershed and San Francisco Bay. This expanded effort was largely due to the input and assistance of the Sacramento River Watershed Program and the Central Valley Regional Water Quality Control Board.

The intended audience for the report includes federal, State, and local agencies, consultants, and other groups or individuals requiring information on water quality monitoring programs in the study area. The goal of this report is to facilitate coordination among agencies performing water quality studies and to promote more efficient use of scarce research and monitoring resources. In the next six months, the Compendium will be made available on-line through the Department of Water Resources' Municipal Water Quality Investigations' website (see document for address).

Additional copies of this report can be obtained from DWR's Bulletins and Reports Section at the address and phone number listed inside the back cover of the report. Any questions or comments can be directed to Rich Breuer, Chief of the MWQI Unit, at (916) 327-1725.

Sincerely,

A handwritten signature in black ink, appearing to read "Phil Wendt".

Phil Wendt, Chief
Water Quality Assessment Branch
Division of Planning and Local Assistance

Enclosure

State of California
The Resources Agency
Department of Water Resources
Division of Planning and Local Assistance

1997
Compendium of
Water Quality Investigations in the
Sacramento River Watershed,
Sacramento-San Joaquin Delta,
and
San Francisco Bay Area

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Pete Wilson
Governor
State of California

Douglas P. Wheeler
Secretary for Resources
The Resources Agency

David N. Kennedy
Director
Department of Water Resources



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State of California
Pete Wilson, Governor

The Resources Agency
Douglas P. Wheeler, Secretary for Resources

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Introduction

Purpose

The 1997 *Compendium of Water Quality Investigations in the Sacramento River Watershed, Sacramento-San Joaquin Delta, and San Francisco Bay Area* presents 450 sampling sites in the Sacramento River watershed, Sacramento-San Joaquin Delta, and the San Francisco Bay area. These sites are sampled as part of 54 water quality programs conducted by federal, State, and local agencies. These agencies were surveyed to obtain information about their programs. This report:

- identifies agencies that have conducted water quality studies or programs in the Sacramento River watershed, Sacramento-San Joaquin Delta, and San Francisco Bay
- encourages coordination, cooperation, and exchange of data and ideas among agencies
- reduces or eliminates duplication and overlap among programs

This report does not cover all water quality programs and sampling sites in the study area. While efforts were made to contact more than 100 programs, only those organizations that responded to the survey could be included. To have a program included in future reports, please call Richard Breuer of the Department of Water Resources at (916) 327-1725, or contact him via World Wide Web at:

<http://www.dpla.water.ca.gov/supply/sampling/mwq/main.htm>

This report and future updates will be available at this website. The website will contain online maps with cross references to participating entities and their programs.

Background

About 45 percent of California's average annual water runoff (31.5 million acre-feet) is generated from the watersheds of the Sacramento River (22.4 maf), San Joaquin River (7.9 maf), and San Francisco Bay (1.2 maf)—an area encompassing 47,310 square miles. Water from this region is used by more than 20 million Californians for agriculture, municipal supply, industry, commerce, and recreation, as well as for maintenance of fish and wildlife. Because so many people and so much of the environment depend upon this water, maintaining good water quality is important. Therefore, accurate data on water quality must be available so sound management decisions can be made.

Because of the complexity and expense of water quality monitoring, it is important that agencies with responsibilities in these watersheds coordinate their work with other agencies. With coordination, scarce research and monitoring resources can be most efficiently used to produce needed information. To achieve coordination, agencies working in these areas need to have access to information on past and current water quality studies being performed by other agencies. ■

Chapter 1

Agencies Surveyed

The following table summarizes the information provided by the federal, State, and local agencies surveyed:

Table 1—Agency Map Identification Codes

Detailed information on federal, State, and local programs is presented in Chapters 2, 3, and 4, respectively. Chapter 5 includes information on unmapped sites.

Water quality monitoring sites are mapped in the following figures:

Figure 1—Study Area

Figure 2—Northeast Area

Figure 3—Northern Area

Figure 4—Central Area

Figure 5—Eastern Area

Figure 6—Southern Area

Figure 7—Sacramento-San Joaquin Delta

Figure 8—San Francisco Bay Area

Table 1. Agency Map Identification Codes

Agency	Program Name	Map ID*
U. S. Bureau of Reclamation	Central Valley Operations Office Water Quality Monitoring Program	F1
U. S. Bureau of Reclamation	Spring Creek Metals	F2
U. S. Fish and Wildlife Service	Urban Stormwater Runoff Effects on Vernal Pool Water, Sediment, and Invertebrates of the Sacramento National Wildlife Refuge	F3
U. S. Geological Survey	Sacramento River Basin National Water Quality Assessment Program	F4
U. S. Geological Survey	Flooded Island Study	F5
U. S. Geological Survey	San Joaquin-Tulare Basins National Water Quality Assessment Program	F6
U. S. Geological Survey	Sacramento River Trace Metal Transport System	F7
U. S. Geological Survey	San Francisco Bay Toxic Substance Hydrology Project	F8
Department of Fish and Game	Hydrilla Eradication Monitoring	S1
Department of Fish and Game	Battle Creek Temperature Study	S2
Department of Fish and Game	Colusa Basin Drain Study	S3
Department of Fish and Game	Four Rivers Project	S4
Department of Pesticide Regulation	Sutter County Department of Agriculture— Pesticide Use Enforcement	S5
Department of Pesticide Regulation	Four Rivers Study	S6
Department of Pesticide Regulation	Sacramento River Watershed Dormant Spray Monitoring Project	S7
Department of Pesticide Regulation	Rice Pesticides Monitoring Program	S8
Department of Water Resources	State Water Project Water Quality Monitoring Program	S9
Department of Water Resources	Compliance Monitoring	S10
Department of Water Resources	Water and Environmental Monitoring Program and Northern California Water Management Program	S11
Department of Water Resources	Upper Feather River	S12
Department of Water Resources	State Water Project—Oroville Field Division	S13
Department of Water Resources	Suisun Marsh Compliance and Monitoring	S14
Department of Water Resources	North Bay Aqueduct/Barker Slough Watershed Project	S15
Department of Water Resources	Delta Water Quality Monitoring	S16
Department of Water Resources	Coordinated Pathogen Monitoring Program	S17
Regional Water Quality Control Board— Central Valley	Dormant Spray Water Quality Program—1997	S18
Regional Water Quality Control Board— Central Valley and State Water Resources Control Board	In-season Orchard Pesticide Runoff Study	S19

*Map ID: F = Federal Program, S = State Program, L = Local Program

Table 1. Agency Map Identification Codes

Agency	Program Name	Map ID*
Regional Water Quality Control Board— Central Valley	Cache Creek Mercury Loading Study	S20
Central Valley Regional Water Quality Control Board—Redding	Spring Creek/Sacramento River Metals Monitoring	S21
Central Valley Regional Water Quality Control Board—Redding	National Pollution Discharge Elimination System— Permit Monitoring	S22
Central Valley Regional Water Quality Control Board—Redding	Mining Remedial Recovery Program	S23
State Water Resources Control Board	State Mussel Watch Program	S24
State Water Resources Control Board	Toxic Substance Monitoring Program	S25
California State University, Chico	Butte Creek Watershed Management Project	L1
Yolo County	Cache Creek Improvement Program	L2
City of Antioch	Regulatory Compliance	L3
City of Lodi	National Pollution Discharge Elimination System— Permit Requirements	L4
City of Redding	Local Limits Program	L5
City of Redding	<i>Giardia/Cryptosporidium</i> Study	L5
City of Sacramento	Sacramento National Pollution Discharge Elimination System—Stormwater Monitoring Program	L6
City of Sacramento	Combined Wastewater Treatment Plant	L6
City of Sacramento	Raw Water Source Monitoring	L7
City of Stockton	National Pollution Discharge Elimination System— Permit Monitoring	L8
City of Stockton—Municipal Utilities Department	Ambient Water Quality Monitoring Program	L8
City of Tracy	Receiving Stream Monitoring	L9
City of Tracy	Delta Mendota Canal	L9
City of Vacaville and City of Fairfield	Safe Drinking Water Act	L10
City of Vallejo	City of Vallejo—Water Quality	L11
Contra Costa Water District	Source Water Monitoring	L12
Dry Creek Conservancy	Dry Creek Conservation Rapid Bioassessment	L13
Goose Lake Fisheries Working Group	Goose Lake Fisheries Working Group	L14
Metropolitan Water District	Source Water Simulated Distribution System	L15
Sacramento Regional County Sanitation District	Sacramento Coordinated Monitoring Program	L16
Sacramento Regional County Sanitation District	Pretreatment Program Priority Pollutants	L17
San Francisco Estuary Institute	San Francisco Estuary Regional Monitoring Program for Trace Substances	L18
Sand and Salt Creek Watershed Project	Sand and Salt Creek Watershed Project Monitoring Program	L19
Sacramento River Watershed Program	Year One Monitoring Program	L20

*Map ID: F = Federal Program, S = State Program, L = Local Program

Sacramento River Watershed
With Delta and San Francisco Bay
Study Area



Figure 1. Study Area

1997 Compendium of Water Quality
Sampling Sites of the Sacramento River Watershed
Northeast Area - Pit River

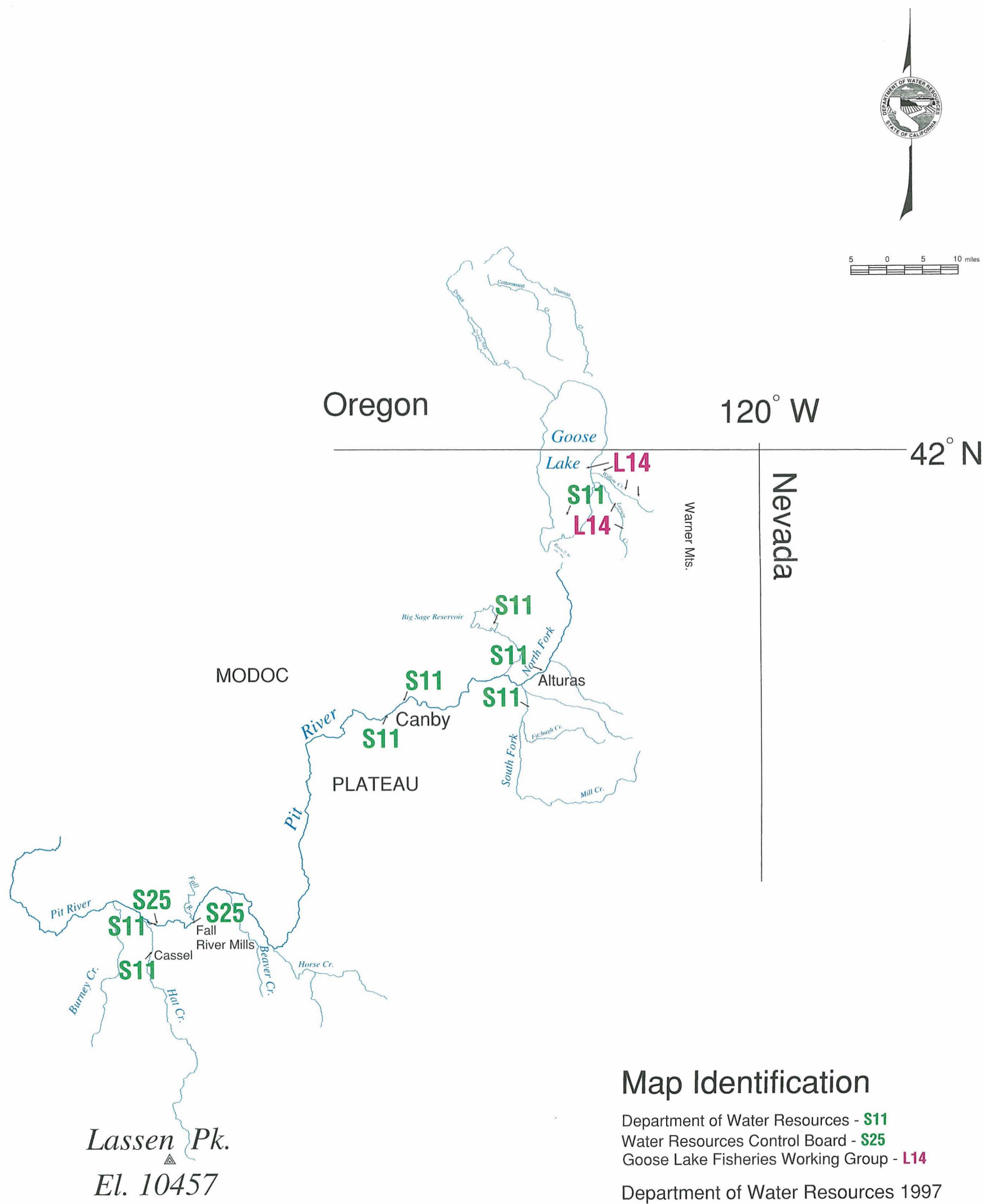
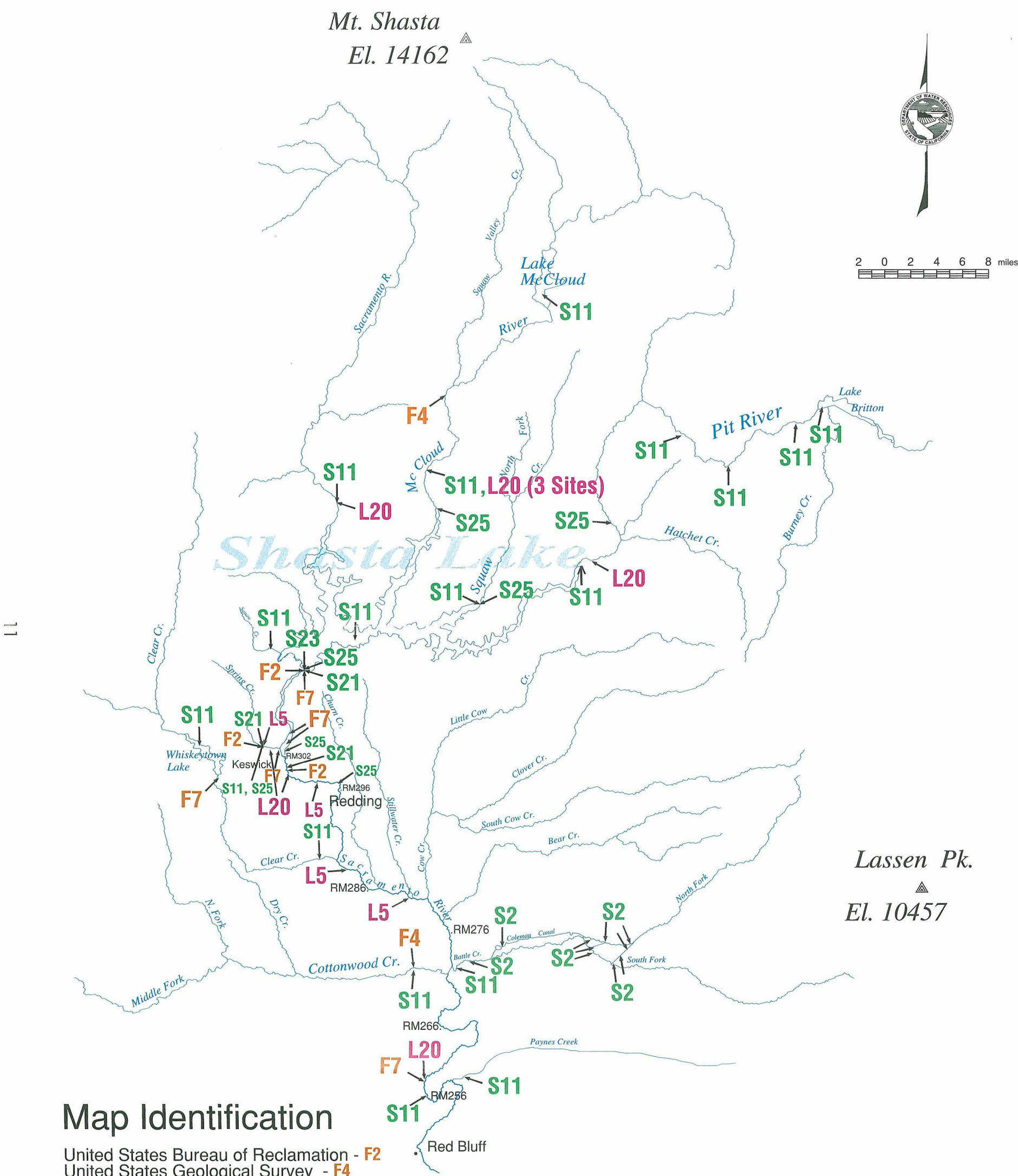


Figure 2. Northeast Area

1997 Compendium of Water Quality Sampling Sites of the Sacramento River Watershed Northern Area



Map Identification

- United States Bureau of Reclamation - **F2**
- United States Geological Survey - **F4**
- United States Geological Survey - **F7**
- Department of Fish and Game - **S2**
- Department of Water Resources - **S11**
- Regional Water Quality Control Board - Redding - **S21**
- Regional Water Quality Control Board - Redding - **S23**
- Water Resources Control Board - **S25**
- City of Redding - **L5**
- Sacramento River Watershed Monitoring Program - **L20**

RM = Sacramento River Miles
U.S. Army Corps of Engineers - 1991 Aerial Atlas

Department of Water Resources 1997

Figure 3. Northern Area

1997 Compendium of Water Quality Sampling Sites of the Sacramento River Watershed Central Area

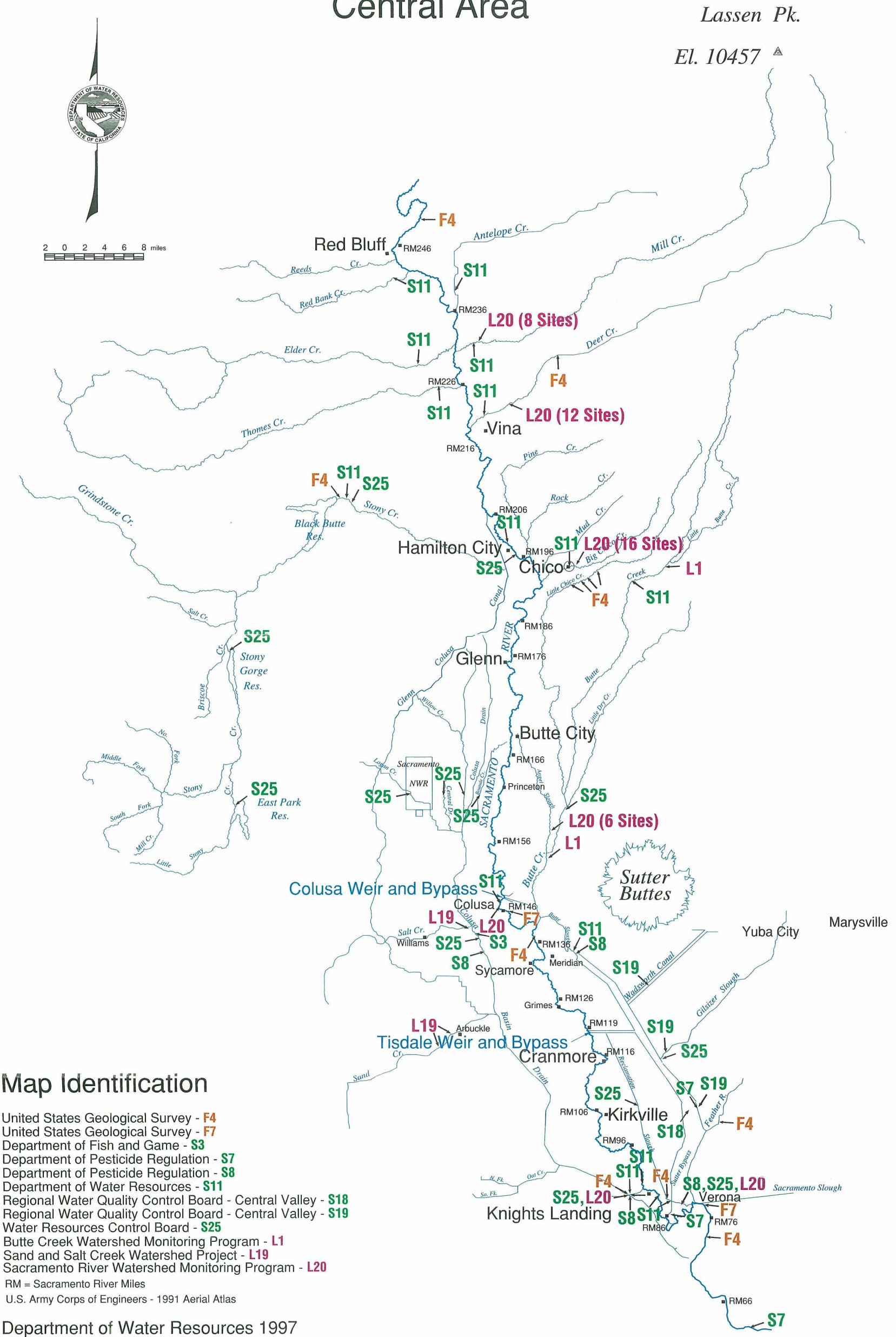


Figure 4. Central Area

1997 Compendium of Water Quality Sampling Sites of the Sacramento River Watershed Eastern Area

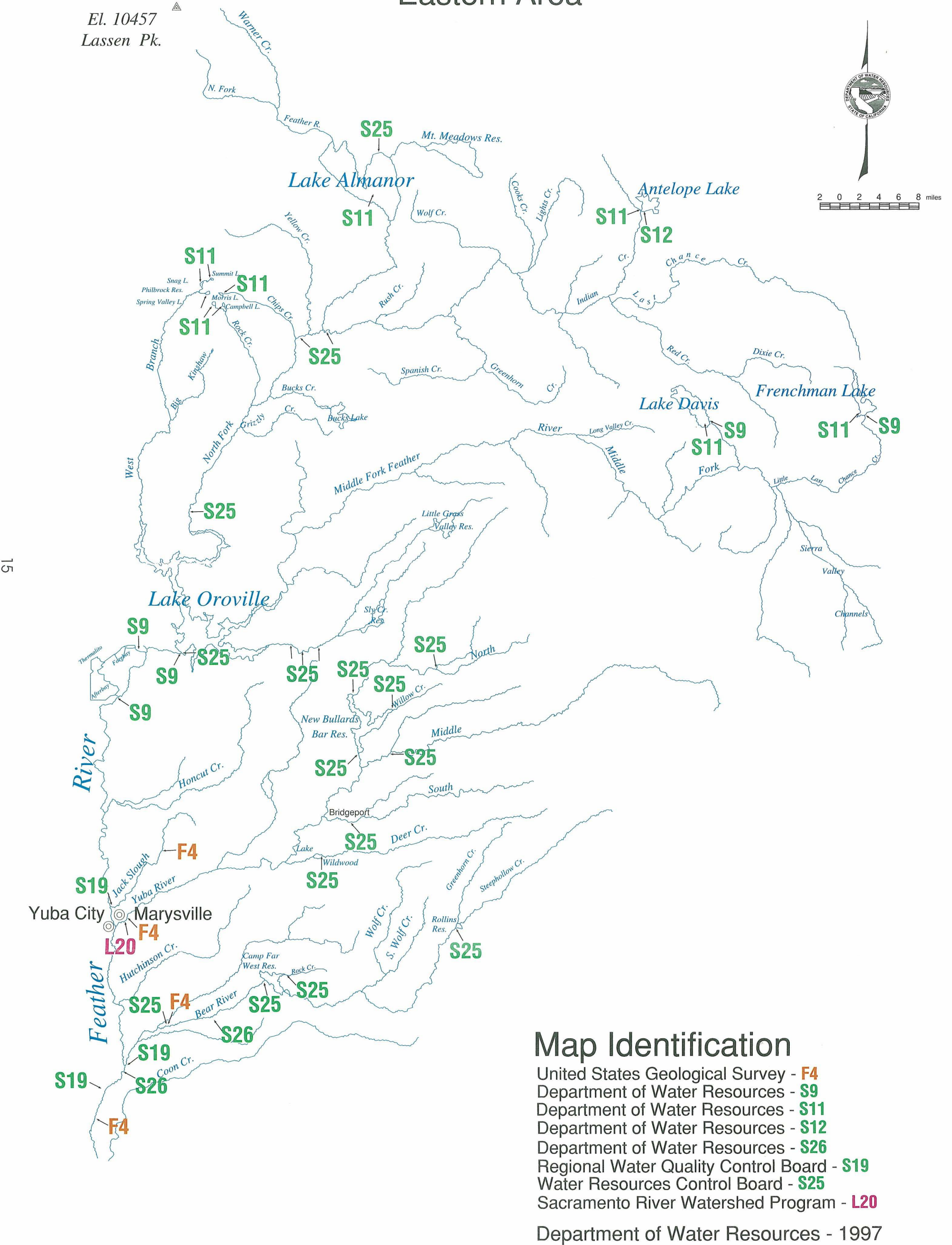
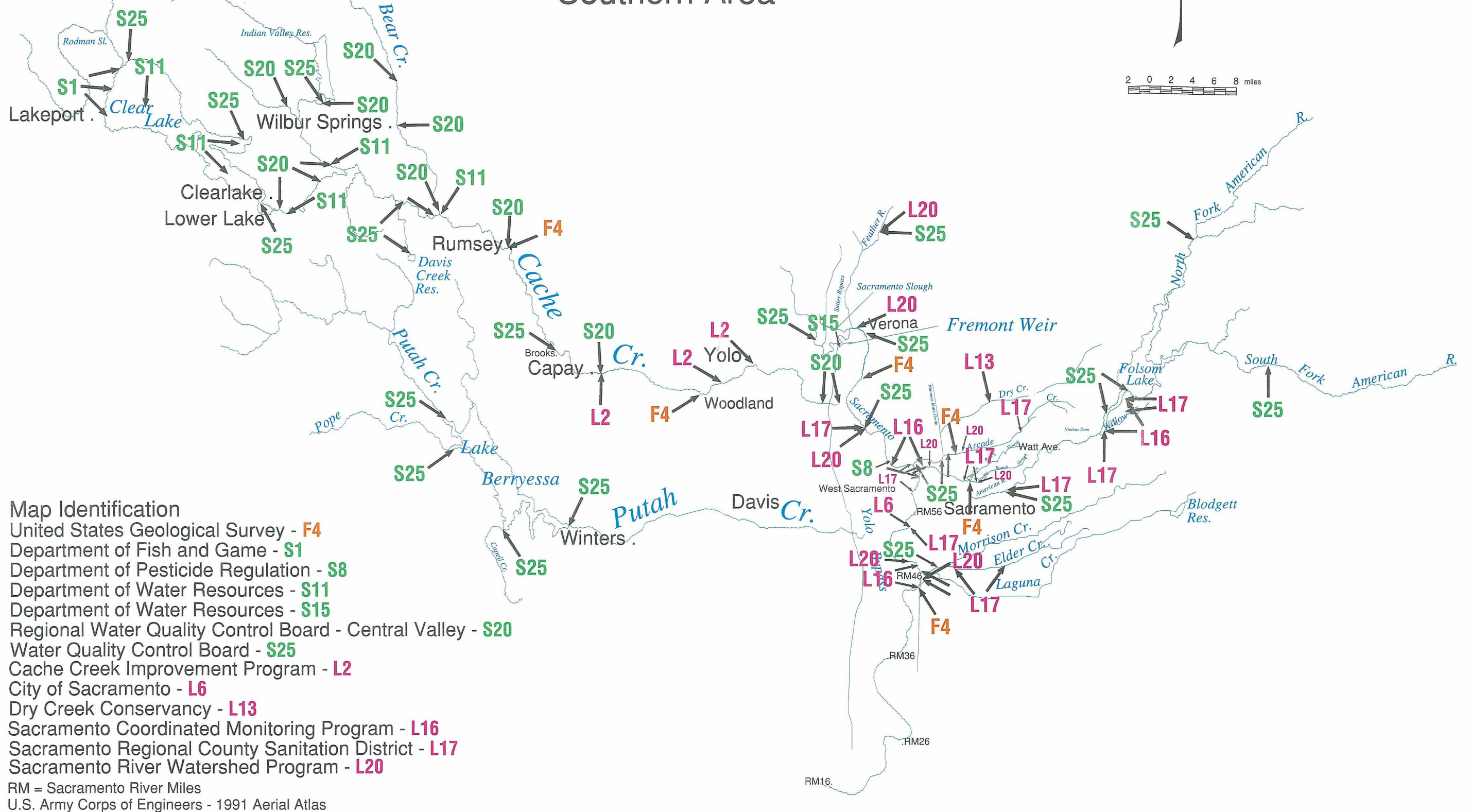


Figure 5. Eastern Area

1997 Compendium of Water Quality Sampling Sites of the Sacramento River Watershed Southern Area



Department of Water Resources 1997

Figure 6. Southern Area

1997 Compendium of Water Quality Sampling Sites of The Sacramento River Watershed Sacramento/San Joaquin River Delta Area

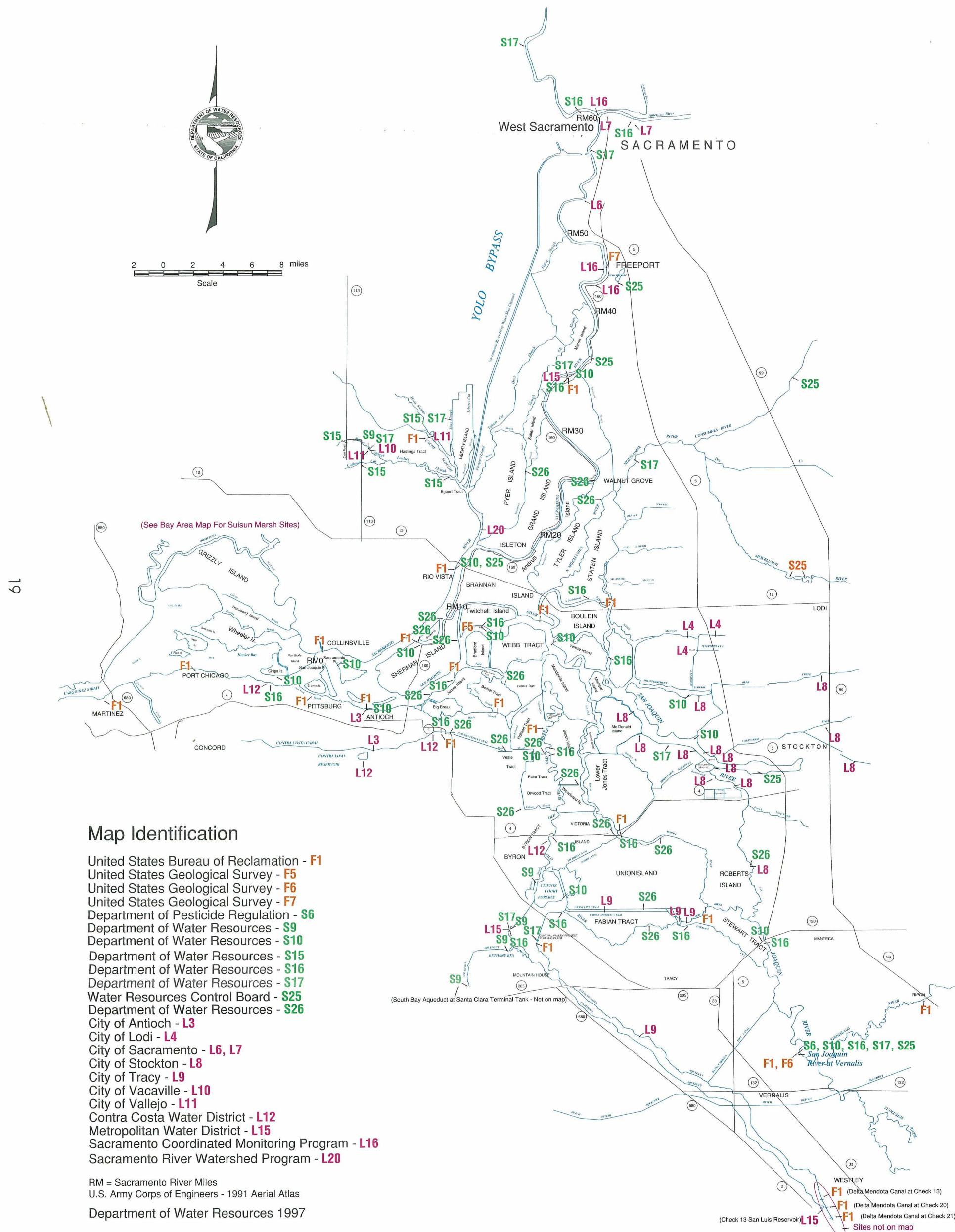
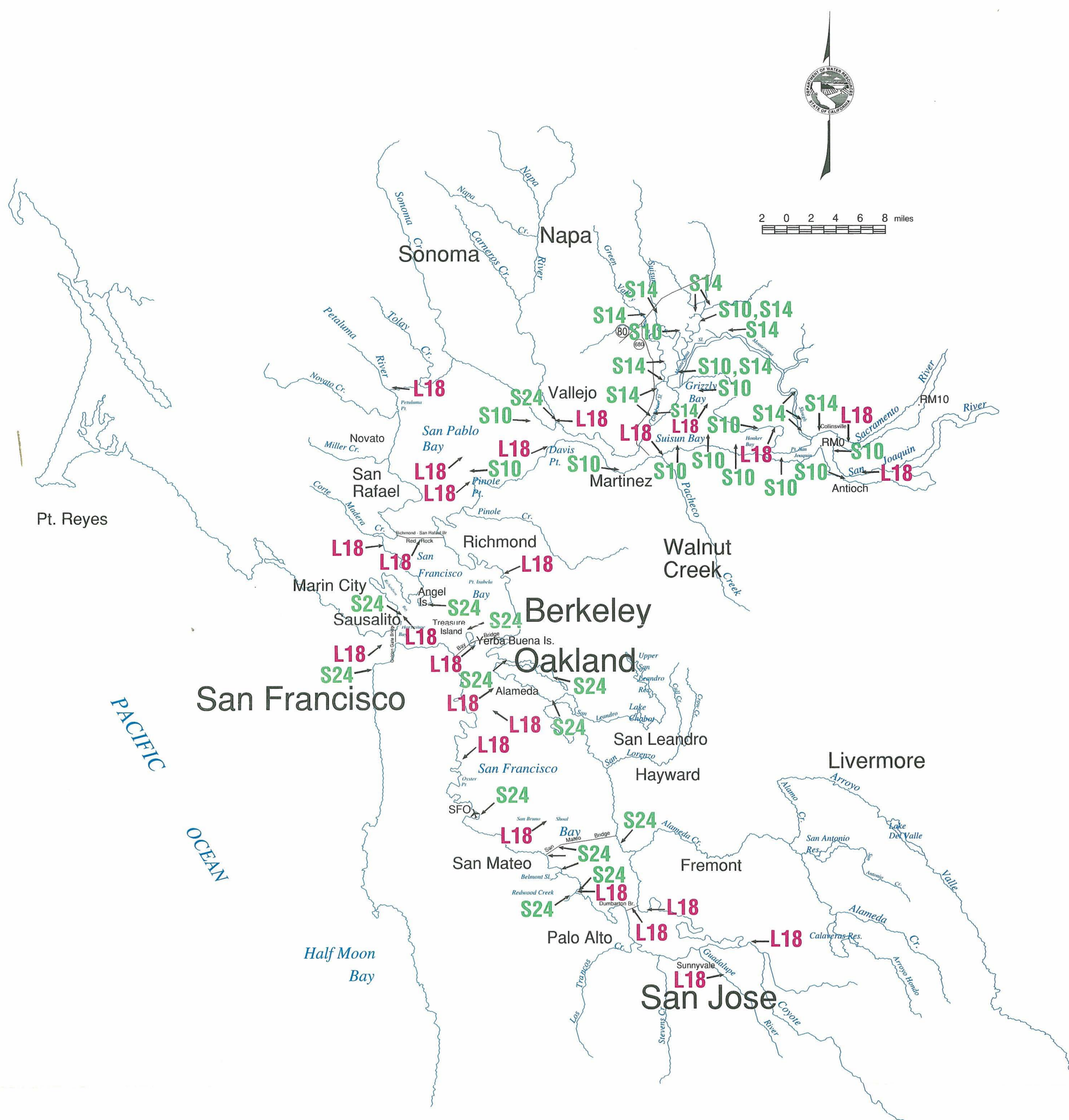


Figure 7. Sacramento-San Joaquin Delta

1997 Compendium of Water Quality
Sampling Sites of the Sacramento River Watershed
San Francisco Bay Area



Map Identification

- Department of Water Resources - S10
- Department of Water Resources - S14
- State Water Resources Control Board - S24
- San Francisco Estuary Institute - L18

RM = Sacramento River Miles
U.S. Army Corps of Engineers - 1991 Aerial Atlas

Department of Water Resources 1997

Figure 8. San Francisco Bay Area

Chapter 2

Federal Programs

U.S. Bureau of Reclamation	24
U.S. Fish and Wildlife Service	28
U.S. Geological Survey	30

F1

Organization: U.S. Bureau of Reclamation

Name of Program: Central Valley Operations Office Water Quality Monitoring Program

Contact Person(s): Stacey Smith	Dominique Azpeitia
USBR	USBR
3310 El Camino Avenue, Suite 300	Route 1, Box 35
Sacramento, CA 95821	Byron, CA 94514-9614
(916) 979-2194	(209) 836-6296
smsmith@mp.usbr.gov	dazpeitia@2to100.mp.usbr.gov

Purpose of Program: To operate the Central Valley Project in compliance with the State Water Resources Control Board Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary.

Year monitoring program began: Mid-1950s

Is the data available to the public? Some stations

How data is available:

a. Bulletin board:

b. Publication:

c. Transferable storage media:

d. Internet: <http://cdec.water.ca.gov/>

e. Spatial mapping (e.g., GIS, CAD):

f. Other: Some stations with raw (unverified) data are on California Data Exchange Center—
<http://cdec.water.ca.gov/>

F1

U.S. Bureau of Reclamation
Central Valley Operations Office Water Quality Monitoring Program

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Electrical conductivity		Telemetered	Hourly	SWRCB compliance
Water	Electrical conductivity		Telemetered	Hourly	SWRCB compliance
	Dissolved oxygen				
	Temperature				

F2

Organization: U.S. Bureau of Reclamation

Name of Program: Spring Creek Metals

Contact Person(s): Stuart Angerer
USBR
16349 Shasta Dam Blvd.
Shasta Lake, CA 96019
(530) 275-1554, ext. 342
sangerer@mp.usbr.gov

Diane Wisniewski
USBR
16349 Shasta Dam Blvd.
Shasta Lake, CA 96019
(530) 275-1554, ext. 345
dwisniewski@mp.usbr.gov

Purpose of Program: To monitor specific metals and the pH in Spring Creek and the Sacramento River downstream of Keswick Dam in compliance with the 1980 Memorandum of Understanding between the State Water Resources Control Board, U.S. Bureau of Reclamation, and Department of Fish and Game.

Year monitoring program began: 1980

Is the data available to the public? No

How data is available:

- a. Bulletin board:
- b. Publication:
- c. Transferable storage media:
- d. Internet:
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other: Contact USBR

F2

U.S. Bureau of Reclamation
Spring Creek Metals

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Cu, Zn pH, hardness	Grab	Flame & graphite furnace	Project specific	Water quality criteria—fish

F3

Organization: U.S. Fish and Wildlife Service

Name of Program: Urban Stormwater Runoff Effects on Vernal Pool Water, Sediment, and Invertebrates of the Sacramento National Wildlife Refuge

Contact Person(s): Tom Maurer
U.S. Fish and Wildlife Service
3310 El Camino Avenue, Suite 130
Sacramento, CA 95821
(916) 979-2110
thomas_maurer@mail.fws.gov

Purpose of Program: To determine the toxicological potential and biological impact of urban stormwater runoff on Llano Seco vernal pool invertebrates.

Year monitoring program began: March 1994

Is the data available to the public? Yes

How data is available:

- a. Bulletin board:
- b. Publication:
- c. Transferable storage media:
- d. Internet: <http://www.fws.gov>
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other:

F3

U. S. Fish and Wildlife Service

Urban Stormwater Runoff Effects on Vernal Pool Water, Sediment, and Invertebrates
of the Sacramento National Wildlife Refuge

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Inorganics	Grab		Within 24 hours of rain events	
Water	Organics	Grab		Within 24 hours of rain events	
Water	Temperature	Grab		Within 24 hours of rain events	
Water	pH	Grab		Within 24 hours of rain events	
Water	DO	Grab		Within 24 hours of rain events	
Water	Conductivity	Grab		Within 24 hours of rain events	

F4

Organization: U.S. Geological Survey

Name of Program: Sacramento River Basin National Water Quality Assessment Program

Contact Person(s): Joseph Domagalski
USGS
Placer Hall – 6000 J Street
Sacramento, CA 95819-6129
(916) 278-3077
joed@usgs.gov

Purpose of Program: To assess the quality of surface water and groundwater in the Sacramento River Basin as part of a national study.

Year monitoring program began: 1994

Is the data available to the public? Yes

How data is available:

- a. Bulletin board:
- b. Publication:
- c. Transferable storage media:
- d. Internet: <http://water.wr.usgs.gov/projects/ca504.html>
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other: Storet (EPA)

F4

U.S. Geological Survey
 Sacramento River Basin National Water Quality Assessment Program

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Major ions	Grab	GC/MS HPLC/UV	Monthly Variable	
Sediment	Nutrients				
Tissue	Trace elements Organic carbon Pesticides Chlorophenoxy herbicides Volatile organic compounds Total mercury Methyl mercury Suspended sediments concentrations pH Temperature Specific conductance (EC) Dissolved oxygen Alkalinity				

F5

Organization: U.S. Geological Survey

Name of Program: Flooded Island Study

Contact Person(s): Roger Fujii
USGS
Placer Hall – 6000 J Street
Sacramento, CA 95819-6129
(916) 278-3055 ; fax (916) 278-3071

Purpose of Program: To assess DOC and/or DBP precursors released from peat soils under different land management scenarios.

Year monitoring program began: 1997

Is the data available to the public? Yes

How data is available:

- a. Bulletin board:
- b. Publication: Draft report due to Department of Water Resources in June 1998
- c. Transferable storage media:
- d. Internet:
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other: DWR-MWQI Water Quality Database

F5

U.S. Geological Survey
Flooded Island Study

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Turbidity	Piezometer		Variable	Drinking water
	Temperature	Grab			
	pH	Lysimeter			
	EC				
	DO				
	Minerals				
	Bromide (Br)				
	Fe, Mn,				
	Eh, Do				
	Iron (Fe)				
	Manganese (Mn)				
	Calcium (Ca)				
	Sodium (Na)				
	Magnesium (Mg)				
	Trihalomethane formation potential		Nuclear magnetic resonance (¹³ CNMR)		
	Dissolved organic carbon		Fractionation using XAD resins		
	UV (abs 254 nm)				
	Alkalinity				

F6

Organization: U.S. Geological Survey

Name of Program: San Joaquin – Tulare Basins National Water Quality Assessment Program

Contact Person(s): Neil Dubrovsky	Charlie Kratzer
USGS	USGS
Placer Hall – 6000 J Street	Placer Hall – 6000 J Street
Sacramento, CA 95819-6129	Sacramento, CA 95819-6129
(916) 278-3078	(916) 278-3076
nmdubrov@usgs.gov	ckratzer@usgs.gov

Purpose of Program: To assess water quality in the San Joaquin Basin, especially with respect to pesticides and nutrients.

Year monitoring program began: 1992

Is the data available to the public? Yes, in published reports and on the internet

How data is available:

- a. Bulletin board: No
- b. Publication: Yes
- c. Transferable storage media: Yes
- d. Internet: <http://water.wr.usgs.gov/projects/ca485.html>;
see also http://water.wr.usgs.gov/sanj_nawqa/
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other:

F6

U.S. Geological Survey
San Joaquin – Tulare Basins National Water Quality Assessment Program

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Major ions	Width/depth integrated	GC/MS HPLC/UV	Monthly Variable	
	Nutrients				
	Organic carbon				
	Pesticides				
	Chlorophenoxy herbicides				
	Volatile organic compounds				
	Suspended sediments concentrations				
	pH				
	Temperature				
	Specific conductance (EC)				
Sediment	Dissolved oxygen				
	Alkalinity				
	Total PCBs				
	Organochlorine compounds				
Tissue	Semivolatile organic compounds				
	Trace elements				
	Total PCBs				
	Organochlorine compounds				
	Semivolatile organic compounds				
	Trace elements				
	Total PCBs				

F7

Organization: U.S. Geological Survey

Name of Program: Sacramento River Trace Metal Transport Study

Contact Person(s): Charlie Alpers	Joe Domagalski
USGS	USGS
Placer Hall – 6000 J Street	Placer Hall – 6000 J Street
Sacramento, CA 95819-6129	Sacramento, CA 95819-6129
(916)278-3134	(916)278-3077
cnalpers@usgs.gov	joed@usgs.gov

Purpose of Program: To quantify the speciation and transport of copper, zinc, lead, cadmium, and mercury in the Sacramento River below Shasta Dam and to identify sources of trace metals to the Sacramento River, including mines, agriculture, and urban runoff. The geochemical studies are designed to determine the processes affecting the transport mechanisms of dissolved metals and metals associated with fine-grained sediments. Improved knowledge of these issues will provide an understanding of how the river responds chemically to introduced metals.

Year monitoring program began: 1996; ended June 1997

Is the data available to the public? Not yet

How data is available:

- a. Bulletin board:
- b. Publication: Draft report expected July 1998
- c. Transferable storage media:
- d. Internet: http://water.wr.usgs.gov/sac_nawqa/
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other:

F7

U.S. Geological Survey
Sacramento River Trace Metal Transport Study

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Major elements (cations)	Composite Grab	ICP-MS	Project specific*	
	Major elements (anions)		ICP-MS		
	Nutrients		IC		
	Dissolved organic carbon		IC + Colormetric		
	SOS				
	Suspended organic carbon		IRS		
Sediment Colloids	Boron (B)		Sequential extractions		
	Cadmium (Cd)				
	Calcium (Ca)				
	Chromium (Cr)				
	Cobalt (Co)				
	Copper (Cu)		ICP-AES		
	Iron (Fe)				
	Lead (Pb)				
	Lithium (Li)				
	Magnesium (Mg)				
	Manganese (Mn)				
	Mercury (Hg)				
	Molybdenum (Mo)				
	Nickel (Ni)				
	Potassium (K)				
	Rubidium (Rb)				
	Selenium (Se)				
	Silica (Si)				
	Silver (Ag)				
	Sodium (Na)				
	Strontium (Sr)				
	Thallium (Tl)				
	Uranium (U)				
	Vanadium (V)				
	Zinc (Zn)				

*Sampling completed in June 1997.

F8

Organization: U.S. Geological Survey

Name of Program: San Francisco Bay Toxic Substance Hydrology Project (no mapped sites)

Contact Person(s): Kathryn M. Kuivila
USGS
Placer Hall - 6000 J Street
Sacramento, CA 95819-6129
(916) 287-3053
kkuivila@usgs.gov

Purpose of Program: To study the transport, transformation, and biological effects of pesticides in the San Francisco Estuary. Studies are designed to answer specific questions; there are no routine monitoring sites. Sampling sites vary, depending on the question the study is trying to address.

Year monitoring program began: 1990

Is the data available to the public? Does not apply

How data is available:

- a. Bulletin board:
- b. Publication: Published in data reports
- c. Transferable storage media:
- d. Internet: <http://water.wr.usgs.gov/projects/ca484.html>
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other:

F8

U.S. Geological Survey
San Francisco Bay Toxic Substance Hydrology Project (no mapped sites)

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
--------	-----------	-----------------	-------------------	-----------	---------------------

Analyze for pesticides—in water, colloids, suspended sediments, and bed sediments. The method depends on what the study is designed to address. Typically, GC-MS or HPLC is used with either solid-phase extraction or liquid-liquid extraction. All sampling is project specific, with no routine sampling sites.

Chapter 3

State Programs

Department of Fish and Game	42
Department of Pesticide Regulation	50
Department of Water Resources	58
Regional Water Quality Control Board—Central Valley	76
Central Valley Regional Water Quality Control Board—Redding	82
State Water Resources Control Board	88

S1

Organization: Department of Fish and Game

Name of Program: Hydrilla Eradication Monitoring

Contact Person(s): Brian Finlayson	Joel Trumbo
Dept. of Fish and Game	Dept. of Fish and Game
1701 Nimbus Road, Suite F	1701 Nimbus Road, Suite F
Rancho Cordova, CA 95670	Rancho Cordova, CA 95670
(916) 358-2950	(916) 358-2952
bfinlays@hg.dfg.ca.gov	jtrumbo@hg.dfg.ca.gov

Purpose of Program: To monitor copper residues in water, sediment, and biota from Clear Lake associated with use of Komeen® for control of hydrilla.

Year monitoring program began: 1996

Is the data available to the public? Yes

How data is available:

- a. Bulletin board:
- b. Publication: Report under development
- c. Transferable storage media:
- d. Internet: <http://www.dfg.ca.gov>
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other:

S1

Department of Fish and Game Hydrilla Eradication Monitoring

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Copper	Grab	AA	Weekly	
Sediment	Copper	Grab	AA	Weekly	
Fish	Copper	Electrofishing	AA	Weekly	
Tule	Copper	Grab	AA	Weekly	
Water	Turbidity	Grab	EPA	Weekly	

S2

Organization: Department of Fish and Game

Name of Program: Battle Creek Temperature Study

Contact Person(s):	Jane Vorpapel	Harry Rectenwald
	Dept. of Fish and Game	Dept. of Fish and Game
	601 Locust Street	601 Locust Street
	Redding, CA 96001	Redding, CA 96001
	(530) 225-2124	(530) 225-2368
	76622.1725@compuserve.com	

Purpose of Program: To document temperatures in different reaches, compute warming due to canal transport, and determine if suitable habitat exists for spring run salmon.

Year monitoring program began: 1995

Is the data available to the public? Yes, after quality assurance is checked

How data is available:

- a. Bulletin board:
- b. Publication:
- c. Transferable storage media: Data available on floppy disks
- d. Internet: <http://www.dfg.ca.gov>
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other: Special request for data

S2

Department of Fish and Game
Battle Creek Temperature Study

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Temperature	Stoway continuous recorders		15 minutes	None

S3

Organization: Department of Fish and Game

Name of Program: Colusa Basin Drain Study

Contact Person(s): Brian Finlayson
Dept. of Fish and Game
1701 Nimbus Road, Suite F
Rancho Cordova, CA 95670
(916) 358-2950
bfinlays@hg.dfg.ca.gov

Purpose of Program: To monitor various pesticides in the Colusa Basin Drain.

Year monitoring program began: 1980

Is the data available to the public? Yes

How data is available:

- a. Bulletin board:
- b. Publication:
- c. Transferable storage media:
- d. Internet: <http://www.dfg.ca.gov>
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other:

S3

Department of Fish and Game
Colusa Basin Drain Study

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Organophosphates Carbamates	Grab	Various Toxicity tests (various)	Various	

S4

Organization: Department of Fish and Game

Name of Program: Four Rivers Project

Contact Person(s): Brian Finlayson
Dept. of Fish and Game
1701 Nimbus Road, Suite F
Rancho Cordova, CA 95670
(916) 358-2950
bfinlays@hg.dfg.ca.gov

Purpose of Program: To characterize the incidence of pesticide residues in the Sacramento, Merced, Salinas, and Russian rivers.

Year monitoring program began: 1993

Is the data available to the public? yes

How data is available:

a. Bulletin board:

b. Publication: *Temporal Distribution of Insecticide Residues in Four California Rivers, December 1997*

c. Transferable storage media:

d. Internet: <http://www.dfg.ca.gov>

e. Spatial mapping (e.g., GIS, CAD):

f. Other:

S4

Department of Fish and Game
Four Rivers Project

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Organophosphates Carbamates	Grab	Various Toxicity tests— <i>Ceriodaphnia dubia</i> <i>Pimephales promelas</i>	Various	

S5

Organization: Department of Pesticide Regulation

Name of Program: Sutter County Department of Agriculture—Pesticide Use Enforcement

Contact Person(s): Stan Anderson	Dave Wilson
Sutter County Department	Sutter County Department
of Agriculture	of Agriculture
142 Garden Highway	142 Garden Highway
Yuba City, CA 95991	Yuba City, CA 95991
(530) 822-7500	(530) 822-7500
	beetles@cwia.com

Purpose of Program: To sample for pesticide residue in connection with a specific enforcement investigation. This department has no routine monitoring program or specific sampling sites.

Year monitoring program began: Late 1970s

Is the data available to the public? Upon request

How data is available:

- a. Bulletin board:
- b. Publication:
- c. Transferable storage media:
- d. Internet:
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other: Hard copy only

S5

Department of Pesticide Regulation
Sutter County Department of Agriculture—Pesticide Use Enforcement

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Various	Grab	Per DPR lab	As needed for investigation	

S6

Organization: Department of Pesticide Regulation

Name of Program: Four Rivers Study

Contact Person(s):	Don Weaver	Carissa Ganapathy
	Dept. of Pesticide Regulation	Dept. of Pesticide Regulation
	1020 N Street, Room 161	1020 N Street, Room 161
	Sacramento, CA 95814	Sacramento, CA 95814
	(916)324-4100	(916) 324-4201
	kbennett@cdpr.ca.gov	cgana@cdpr.ca.gov

Purpose of Program: To characterize the incidence of pesticide residues in the Sacramento, Merced, Salinas, and Russian rivers.

Year monitoring program began: 1993

Is the data available to the public? Yes

How data is available:

- a. Bulletin board:
- b. Publication: *Temporal Distribution of Insecticide Residues in Four California Rivers, December 1997*
- c. Transferable storage media:
- d. Internet:
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other:

S6

Department of Pesticide Regulation
Four Rivers Study

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Organophosphates Carbamates	Grab	Various Toxicity tests— <i>Ceriodaphnia dubia</i> <i>Pimephales promelas</i>	Various	

S7

Organization: Department of Pesticide Regulation

Name of Program: Sacramento River Watershed Dormant Spray Monitoring Project

Contact Person(s): Craig Nordmark	Pat Dunn
Dept. of Pesticide Regulation	Dept. of Pesticide Regulation
1020 N Street, Room 161	1020 N Street, Room 161
Sacramento, CA 95814	Sacramento, CA 95814
(916) 324-4138	(916) 324-4100
cnordmark@cdpr.ca.gov	pdunn@cdpr.ca.gov

Purpose of Program: To monitor the occurrence of toxicity, both acute and chronic, and the levels of dormant spray pesticides in the Sacramento River watershed during the dormant spray season.

Year monitoring program began: 1996

Is the data available to the public? Yes

How data is available:

- a. Bulletin board:
- b. Publication: Environmental Hazards Assessment Program report in progress
- c. Transferable storage media:
- d. Internet: <http://www.cdpr.ca.gov>
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other:

S7

Department of Pesticide Regulation
Sacramento River Watershed Dormant Spray Monitoring Project

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Pesticides (various)	Grab	CDFG (GC, HPLC)	3x/week for 12 weeks	W.Q. criteria for protection of aqu. org.
Water	Chronic toxicity	Grab	USEPA chronic fresh	1x/week for 12 weeks	Basin Plan-narrative toxicity criteria
Water	Pesticides (various)	Grab	CDFG acute fresh	2x/week for 12 weeks	W.Q. criteria for protection of aqu. org.
Water	Acute toxicity	Grab	USEPA acute fresh	2x/week for 12 weeks	Basin Plan-narrative

S8

Organization: Department of Pesticide Regulation

Name of Program: Rice Pesticides Monitoring Program

Contact Person(s):	Nan Gorder	Kaylynn Newhart
	Dept. of Pesticide Regulation	Dept. of Pesticide Regulation
	1020 N Street, Room 161	1020 N Street, Room 161
	Sacramento, CA 95814	Sacramento, CA 95814
	(916) 324-4265	(916) 324-4190
	ngorder@cdpr.ca.gov	knewhart@cdpr.ca.gov

Purpose of Program: To reduce discharges of the rice pesticides molinate (Ordram®), carbofuran (Furadan®), thiobencarb (Bolero® and Abolish®), malathion, and methyl parathion into surface waters ultimately leading to the Sacramento River. The Environmental Monitoring and Pest Management Branch staff coordinate an annual program to monitor these pesticides in agricultural drains and the Sacramento River. Monitoring ensures that water quality goals established by the Central Valley Regional Water Quality Control Board are not exceeded in these waterways.

Year monitoring program began: 1983

Is the data available to the public? Yes

How data is available:

- a. Bulletin board:
- b. Publication:
- c. Transferable storage media:
- d. Internet: <http://www.cdpr.ca.gov>
- e. Spatial mapping (e.g., GIS, CAD):

S8

Department of Pesticide Regulation Rice Pesticides Monitoring Program

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Carbofuran	Integrated depth sampler	HPLC	2x/wk during app.	Water quality performance goal
Aquatic invertebrates	Pesticides	Integrated depth sampler	E729-90(EPA) Eii92-90	1x during app. season	Toxicity
Water	Thiobencarb	Integrated depth sampler	GC with NPD method Rm-16W-4	2x/wk during app.	Water quality performance goal
Water	Molinate	Integrated depth sampler	WRC 89-45	2x/wk during app.	Water quality performance goal
Water	Methyl parathion	Integrated depth sampler	LC-APCI/MS/ MS GC with FDP	2x/wk during app.	Water quality performance goal
Water	Malathion	Integrated depth sampler	LC-APCI/MS/ MS GC with FDP	2x/wk during app.	Water quality performance goal

S9

Organization: Department of Water Resources

Name of Program: State Water Project Water Quality Monitoring Program

Contact Person(s):	Daniel F. Peterson	Larry Joyce
	Dept. of Water Resources	Dept. of Water Resources
	1416 Ninth Street	1416 Ninth Street
	Sacramento, CA 95814	Sacramento, CA 95814
	(916) 653-9978	(916) 653-7213
	danp@water.ca.gov	ljoyce@water.ca.gov

Purpose of Program: (1) To assess the relative quality of State Water Project water by comparing concentration data to Article 19 objective or Department of Health Services drinking water standards; (2) document long-term changes in SWP water quality; (3) provide SWP contractors with water quality data to assess operational needs of water treatment plants; (4) identify, monitor, and respond to water quality emergencies and determine impacts to SWP; (5) assess the influence of water operations on SWP water quality.

Year monitoring program began: 1968

Is the data available to the public? Yes

How data is available:

- a. Bulletin board:
- b. Publication: Bulletin 132 and SWP water quality reports
- c. Transferable storage media: Floppy disk
- d. Internet: <http://www.womhq.water.ca.gov/wq/wqhomepage>
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other: Monthly data reports of SWP operations

S9

Department of Water Resources
State Water Project Water Quality Monitoring Program

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Minerals	Grab		Variable	Art. 19 and Drinking Wtr. Std.
Water	Minerals	Grab	AA, flame		
Water	Nutrients	Grab	Colormetric		
Water	Organics (various)	Grab	GC		
Water	Physical parameters	Automated sampling		Hourly	
Water	Pathogen <i>cryptosporidium</i> <i>giardia</i>	Filtered sampling	USEPA	Monthly	
Water	Coliform	Grab	Colilert	Monthly	

S10

Organization: Department of Water Resources

Name of Program: Compliance Monitoring

Contact Person(s): Leo Winternitz	Stephen P. Hayes
Dept. of Water Resources	Dept. of Water Resources
3251 S Street	3251 S Street, Room C-29
Sacramento, CA 95816	Sacramento CA 95816
(916) 227-7548	(916) 227-0439
lwintern@water.ca.gov	shayes@water.ca.gov

Purpose of Program: To comply with conditions of the Water Right Permit issued to the Department by the State Water Resources Control Board for operating the State Water Project. The monitoring program provides information to ensure compliance with standards issued by the Board.

Year monitoring program began: 1970

Is the data available to the public? Yes

How data is available:

- a. **Bulletin board:**
- b. **Publication:** Annual water quality and special study reports
- c. **Transferable storage media:**
- d. **Internet:** <http://www.iep.ca.gov>
- e. **Spatial mapping (e.g., GIS, CAD):** Spatial mapping of continuous (onboard boat) monitoring data; see <http://www.iep.ca.gov/wqdata>
- f. **Other:**

S10

Department of Water Resources
Compliance Monitoring

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Air	Temperature Wind velocity and direction			Continuous Monthly	Water Right Decision 1485 as modified by Water Quality Control Plan 95-IWR of May 1995
Water	Temperature Dissolved oxygen pH EC Turbidity Secchi Nutrients* Chlorophyll <i>a</i> Phytoplankton Heavy metals**				
Sediments	Benthos				

* Nutrient sampling includes dissolved organic N, total NH_3 , dissolved NO_2 and NO_3 , total organic N, ortho- PO_4 , and total PO_4 .

** Historical data only, 1975—1995

S11

Organization: Department of Water Resources

Name of Program: Water and Environmental Monitoring Program and
Northern California Water Management Program

Contact Person(s): Jerry Boles
Dept. of Water Resources
2440 Main Street
Red Bluff, CA 96080
(530) 529-7326
bolesj@water.ca.gov

Purpose of Program: To maintain a long-term water quality database and assess water quality conditions of lakes, streams, bays, and estuaries.

Year monitoring program began: 1960

Is the data available to the public? Yes

How data is available:

- a. **Bulletin board:**
- b. **Publication:** Various
- c. **Transferable storage media:** Floppy, zip
- d. **Internet:** summer 1998
- e. **Spatial mapping (e.g., GIS, CAD):**
- f. **Other:** ftp, hard copy, email

S11

Department of Water Resources
 Water and Environmental Monitoring -Program and
 Northern California Water Management Program

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Minor elements Minerals Nutrients DO pH	Grab	ICP/M Cation ICP Titrate Colormetric Field probe	Varies, depending on program and parameter*	
	Turbidity Conductivity Macroinvertebrates Bacteria Pathogens Organic contaminants Temperature	Continuous recorders			

*Chemical and field data collected monthly; temperature collected continuously via recorder

S12

Organization: Department of Water Resources

Name of Program: Upper Feather River

Contact Person(s):	Ron Vanscoy	Ralph Howell
	Dept. of Water Resources	Dept. of Water Resources
	Post Office Box 38	Post Office Box 38
	Beckwourth, CA 96129	Beckwourth, CA 96129
	(530) 832-5161	(530) 832-5161
	vanscoy@ofd	howell@ofd

Purpose of Program: To obtain biological control information at Antelope and Frenchman Reservoirs (annually) and at Lake Davis (monthly, May through September).

Year monitoring program began: 1962

Is the data available to the public? No

How data is available:

- a. Bulletin board:
- b. Publication: Yes
- c. Transferable storage media:
- d. Internet: <http://www.woco.water.ca.gov/>
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other:

S12

Department of Water Resources
Upper Feather River

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Nutrient, phytoplankton, minor elements	Grab		Annually	SWP Water Quality Manual
Water	Nutrient phytoplankton, minor elements	Grab		Monthly, May-Sep	SWP Water Quality Manual

S13

Organization: Department of Water Resources

Name of Program: State Water Project – Oroville Field Division

Contact Person(s): C. Ed Robbins
Dept. of Water Resources
Post Office Box 1191
Oroville, CA 95965
(530) 534-2446

Purpose of Program: To monitor water quality.

Year monitoring program began: 1970

Is the data available to the public? Yes

How data is available:

- a. Bulletin board:
- b. Publication: Yes
- c. Transferable storage media:
- d. Internet: <http://www.woco.water.ca.gov/>
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other:

S13

Department of Water Resources
State Water Project – Oroville Field Division

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Nutrient, phytoplankton	Grab		Monthly Apr-Nov	SWP Water Quality Manual
Water	Nutrient , phytoplankton, minerals, minor elements	Grab		Monthly	SWP Water Quality Manual
Water	Minor elements, minerals	Grab		Quarterly	SWP Water Quality Manual

S14

Organization: Department of Water Resources

Name of Program: Suisun Marsh Compliance and Monitoring

Contact Person(s): Karl Jacobs
Dept. of Water Resources
3251 S Street, Room A-16
Sacramento, CA 95816
(916) 227-0435
kjacobs@water.ca.gov

Purpose of Program: To comply with monitoring requirements specified in Tables 2 and 3 of Water Right Decision 1485. Additional data is collected to determine if DWR and USBR are meeting the objectives specified in the Suisun Marsh Preservation Agreement.

Year monitoring program began: 1983

Is the data available to the public? Yes

How data is available:

- a. Bulletin board:
- b. Publication:
- c. Transferable storage media:
- d. Internet: <http://www.iep.ca.gov>
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other:

S14

Department of Water Resources
Suisun Marsh Compliance and Monitoring

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Specific conductance Water temperature Flow and tide stage	Continuous monitoring	On-site analysis automated	15 minutes	D1485

S15

Organization: Department of Water Resources

Name of Program: North Bay Aqueduct/Barker Slough Watershed Project

Contact Person(s): Richard Breuer
Department of Water Resources
1020 9th Street
Sacramento, CA 95814
(916) 327-1725
rich@water.ca.gov

Purpose of Program: To understand the seasonal variability of water quality in the Barker Slough watershed and adjacent slough.

Year monitoring program began: 1996

Is the data available to the public? Yes

How data is available:

- a. Bulletin board: Yes
- b. Publication: Yes
- c. Transferable storage media:
- d. Internet: <http://www.dpla.water.ca.gov/supply/sampling/mwqi/main2.htm>
- e. Spatial mapping (e.g., GIS, CAD): Yes
- f. Other:

S15

Department of Water Resources
North Bay Aqueduct/Barker Slough Watershed Project

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	pH	Grab	Standard methods	Daily	Drinking water - DHS
	Temperature			Weekly	
	Dissolved oxygen			Monthly	
	EC			Storm event	
	Turbidity				
	Dissolved organic carbon				
	Total organic carbon				
	Alkalinity				
	UVabs (254nm)				
	THMFP				
	Nutrients				
	Total metals				
	Iron (Fe)				
	Manganese (Mn)				
	Aluminum (Al)				
	Dissolved metals				
	Fe				
	Mn				
	Al				
	<i>E. coli</i>		Colilert		
	<i>Cryptosporidium</i>				
	<i>Giardia</i>				
	Pesticides				

S16

Organization: Department of Water Resources

Name of Program: Delta Water Quality Monitoring

Contact Person(s): Richard Breuer
Dept. of Water Resources
1020 9th Street
Sacramento, CA 95814
(916) 327-1725
rich@water.ca.gov

Purpose of Program: To determine and evaluate the source of contaminants that affect the drinking water quality of the Delta, and to investigate and recommend means of managing Delta waters used as drinking water sources.

Year monitoring program began: 1983

Is the data available to the public? Yes

How data is available:

- a. Bulletin board:
- b. Publication:
- c. Transferable storage media: Microsoft Access or Excel on floppies
- d. Internet: <http://www.dpla.water.ca.gov/supply/sampling/mwqi/main.htm>
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other:

S16

Department of Water Resources
Delta Water Quality Monitoring

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Organics, inorganics, pH, DO, EC, temperature, turbidity TOC DOC THMFP Alkalinity	Grab samples, Auto- samplers,		Grab samples once monthly; Grabs for organics and inorganics once quarterly* Autosampler- three times a week*	

*Historical

S17

Organization: Department of Water Resources

Name of Program: Coordinated Pathogen Monitoring Program

Contact Person(s): Richard Breuer
Dept. of Water Resources
1020 9th Street
Sacramento, CA 95814
(916) 327-1725
rich@water.ca.gov

Purpose of Program: To determine baseline levels of selected protozoa and bacteria in the State Water Project and source waters.

Year monitoring program began: 1996

Is the data available to the public? A report will be available in fall 1998.

How data is available:

- a. Bulletin board:
- b. Publication: Report to be published in fall 1998
- c. Transferable storage media:
- d. Internet:
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other:

S17

Department of Water Resources
Coordinated Pathogen Monitoring Program

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Raw water	<i>Giardia</i>	USEPA ICR*	USEPA ICR**	Monthly, plus storm and flood events	None
Raw water	<i>Cryptosporidium</i>	*	**		
Raw water	Total/fecal coliforms and <i>E. coli</i>	100ml grab	Standard methods, 5 tube, 5 dilution		
Raw water	<i>Clostridium perfringens</i>	100ml grab***			

*USEPA Information Collection Requirements Rule: Protozoa and Enteric Virus Sample Collection Procedures, EPA/314-B-95-001, June 1995.

**USEPA ICR Protozoan Method for Detecting *Giardia* Cysts and *Cryptosporidium* Oocysts in Water by a Fluorescent Antibody Procedure. Section VII, EPA/600/R-95/178, April 1996.

***USEPA ICR Membrane Filter Method for *C. perfringens*, Section XI, EPA/600/R-95/178, April 1996.

S18

Organization: Regional Water Quality Control Board — Central Valley

Name of Program: Dormant Spray Water Quality Program — 1997

Contact Person(s):	Chris Foe	Vic DeVlaming
	CVRWQCB	SWRCB
	3443 Routier Road	901 P Street
	Sacramento, CA 95827	Sacramento, CA 95814
	(916) 255-3113	(916) 657-0795
	chris@bptcp1.swrcb.ca.gov	

Purpose of Program: To monitor concentrations and toxicity of dormant spray runoff in drains in the Sacramento and San Joaquin basins after long storms. Sampling occurred in late January and February 1997. Sutter Bypass at Sacramento Avenue was the only site monitored in the Sacramento watershed.

Year monitoring program began: 1997

Is the data available to the public? Yes

How data is available:

- a. Bulletin board:
- b. Publication: Yes
- c. Transferable storage media:
- d. Internet:
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other:

S18

Regional Water Quality Control Board — Central Valley
Dormant Spray Water Quality Program — 1997

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Bioassays, pesticides	Grab	<i>Ceriodaphnia</i> Elisa Kit Solid phase GC/MS analysis	Daily during storms	Fish and Game hazard assessment criteria

S19

Organization: Regional Water Quality Control Board — Central Valley
State Water Resources Control Board

Name of Program: In-season Orchard Pesticide Runoff Study

Contact Person(s):	Chris Foe	Vic DeVlaming
	CVRWQCB	SWRCB
	3443 Routier Road, Suite A	901 P Street
	Sacramento, CA 95827	Sacramento, CA 95814
	(916) 255-3113	(916) 657-0795
	chris@bptcp1.swrcb.ca.gov	

Purpose of Program: To monitor orchards in 13 watersheds biweekly in the Sacramento Valley and determine whether toxicity to *Ceriodaphnia* is occurring, and to identify the primary pesticides responsible for the toxicity.

Year monitoring program began: April 1997 and September 1997

Is the data available to the public? Not yet available

How data is available:

- a. Bulletin board:
- b. Publication: Not yet available
- c. Transferable storage media:
- d. Internet:
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other:

S19

Regional Water Quality Control Board — Central Valley
In-season Orchard Pesticide Runoff Study

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Pesticide	Grab	Bioassays, Toxicity Identification Evaluation <i>Ceriodaphnia</i> Elisa Kit GC/MS	Weekly	Normative objective for bioassay; Fish and Game hazard assessment criteria for pesticides

S20

Organization: Regional Water Quality Control Board — Central Valley

Name of Program: Cache Creek Mercury Loading Study

Contact Person(s):	Chris Foe	Bill Croyle
	CVRWQCB-Sacramento	CVRWQCB-Sacramento
	3443 Routier Road, Suite A	3443 Routier Road, Suite A
	Sacramento, CA 95827	Sacramento, CA 95827
	(916) 255-3113	(916) 255-3091
	chris@bptcp1.swrcb.ca.gov	billc@bptcp1.swrcb.ca.gov

Purpose of Program: To determine concentration and sources of mercury within the Cache Creek watershed and estimate the loads exported to the Yolo Basin.

Year monitoring program began: Winter 1995

Is the data available to the public? Yes

How data is available:

- a. Bulletin board:
- b. Publication: Yes
- c. Transferable storage media:
- d. Internet:
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other:

S20

Central Valley Regional Water Quality Control Board — Central Valley
Cache Creek Mercury Loading Study

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Mercury	Grab	Standard Methods	Storm event	N/A

S21

Organization: Central Valley Regional Water Quality Control Board — Redding

Name of Program: Spring Creek/Sacramento River Metals Monitoring

Contact Person(s): Dennis Heiman
CVRWQCB-Redding
415 Knollcrest Drive
Redding, CA 96001
(530) 224-4851

Purpose of Program: To monitor metals in the upper Sacramento River system.

Year monitoring program began:

Is the data available to the public? Yes

How data is available:

- a. Bulletin board:
- b. Publication: Yes
- c. Transferable storage media:
- d. Internet:
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other:

S21

Regional Water Quality Control Board — Central Valley
Spring Creek/Sacramento River Metals Monitoring

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
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Contact
Dennis Heiman
for specific
information
(530) 224-4851

S22

Organization: Central Valley Regional Water Quality Control Board—Redding

Name of Program: National Pollution Discharge Elimination System—Permit Monitoring

Contact Person(s): Dennis Heiman
CVRWQCB—Redding
415 Knollcrest Drive
Redding, CA 96001
(530) 224-4851

Purpose of Program: (1) To monitor metals with USBR and Stauffer Chemical; (2) to monitor for NPDES permit.

Year monitoring program began:

Is the data available to the public? Yes

How data is available:

- a. Bulletin board:
- b. Publication: Yes
- c. Transferable storage media: In part
- d. Internet:
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other:

S22

Central Valley Regional Water Quality Control Board—Redding
National Pollution Discharge Elimination System—Permit Monitoring

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
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Contact Dennis
Heiman for
specific
information
(530)224-4851

S23

Organization: Central Valley Regional Water Quality Control Board—Redding

Name of Program: Mining Remedial Recovery Program

Contact Person(s): Linda Mercurio
CVRWQCB—Redding
3756 Rosita Drive
Redding, CA 96001
(530) 244-7390
lmercurio@mon.com

Purpose of Program: To select and evaluate remedial actions at inactive mine sites.

Year monitoring program began: 1981

Is the data available to the public? Yes

How data is available:

- a. Bulletin board:
- b. Publication:
- c. Transferable storage media:
- d. Internet:
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other:

S23

Central Valley Regional Water Quality Control Board—Redding
Mining Remedial Recovery Program

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Cd, Cu, Zn	Grab	EPA 200.7	Quarterly	Basin Plan
Water	pH	Grab	EPA 150.1	Quarterly	

S24

Organization: State Water Resources Control Board

Name of Program: State Mussel Watch Program

Contact Person(s): Del Rasmussen
SWRCB, Division of Water Quality
Post Office Box 944213
Sacramento, CA 94244
(916) 657-0916
rasmd@dwq.swrcb.ca.gov

Purpose of Program: To monitor tissue residue of mussels and clams statewide (coastal).

Year monitoring program began: 1977

Is the data available to the public? Yes

How data is available:

- a. **Bulletin board:** No
- b. **Publication:** Yes — contact (916) 657-1247. Reports minus maps are also available at the internet address below—click "General," click "Publications."
- c. **Transferable storage media:**
- d. **Internet:** Yes. Database is available at www.swrcb.ca.gov; click "General," click "Other Sources of Information." Database is currently available in two formats—dBase and Lotus. Both are ZIP files.
- e. **Spatial mapping (e.g., GIS, CAD):** No
- f. **Other:**

S24

State Water Resources Control Board
State Mussel Watch Program

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Tissue mussels and clams (also some sediment)	Pesticides, metals	Resident and transplanted	AA, GC	Annual	Shellfish criteria

S25

Organization: State Water Resources Control Board

Name of Program: Toxic Substance Monitoring Program

Contact Person(s): Del Rasmussen
SWRCB, Division of Water Quality
Post Office Box 944213
Sacramento, CA 94244
(916) 657-0916
rasmd@dwq.swrcb.ca.gov

Purpose of Program: To monitor tissue residue statewide.

Year monitoring program began: 1976

Is the data available to the public? Yes

How data is available:

a. Bulletin board: No

b. Publication: Yes — contact (916) 657-1247. Reports minus maps are also available at the internet address below—click "General," click "Publications."

c. Transferable storage media:

d. Internet: Yes. Database is available at www.swrcb.ca.gov; click "General," click "Other Sources of Information." Database is currently available in two formats—dBase and Lotus. Both are ZIP files.

e. Spatial mapping (e.g., GIS, CAD): No

f. Other: Other information available

S25

State Water Resources Control Board
Toxic Substance Monitoring Program

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Fish tissue Invertebrates (Also some sediments)	Pesticides, metals	Various	AA, GC	Annual	Fish tissue criteria

Chapter 4

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L1

Organization: California State University, Chico

Name of Program: Butte Creek Watershed Management Project

Contact Person(s): Donald Holtgrieve
CSU Chico—Dept. of Geography
Chico, CA 95929-0425
(530) 898-5780
dholtgrieve@oauax.csuchico.edu

Purpose of Program: To develop watershed management strategies for Butte Creek watershed.

Year monitoring program began: Not yet begun

Is the data available to the public? Will be available; check with contact person.

How data is available:

- a. Bulletin board:
- b. Publication:
- c. Transferable storage media:
- d. Internet:
- e. Spatial mapping (e.g., GIS, CAD): Yes
- f. Other:

L1

California State University, Chico
Butte Creek Watershed Management Project

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Invertebrates	Bioassessment	Fish & Game protocol		Quarterly	

L2

Organization: Yolo County

Name of Program: Cache Creek Improvement Program

Contact Person(s): David Morrison
Yolo County Planning and Public Works Department
292 West Beamer Street
Woodland, CA 95695
(530) 666-8041
david.morrison@yoloco.fabrik.com

Purpose of Program: To implement those portions of the Cache Creek resource management plan related to the stabilization, restoration, and maintenance of Cache Creek. CCIP is implemented in cooperation with creekside landowners. It has three components: (1) identify and construct major erosion control projects, (2) create a multitiered channel profile that maintains flood control capacity, and (3) conduct a hydraulic and biological monitoring program to provide feedback on previous efforts and to evaluate trends for future recommendations.

Year monitoring program began: 1997

Is the data available to the public? Yes

How data is available:

- a. **Bulletin board:**
- b. **Publication:** *Cache Creek Annual Status Report*
- c. **Transferable storage media:** Yes
- d. **Internet:** Not at this time
- e. **Spatial mapping (e.g., GIS, CAD):** Not at this time
- f. **Other:** Hard copy, U.S. mail

L2

Yolo County Cache Creek Improvement Program

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Herbicides/ pesticides	Grab	EPA 8150 EPA 8140	Annual	MCL
Water	pH	Grab	pH meter	Annual	CVRWQCB Basin Plan
Water	TDS	Grab	EPA 160.1	Annual	MCL
Water	Total/ fecal coliform	Grab	SMWW 9221	Annual	MCL
Water	Mercury	Grab	EPA 7470	Annual	MCL
Water	Total petroleum hydrocarbons	Grab	EPA 418.1	Annual	MCL
Water	Dissolved oxygen	Grab	EPA 360.1 or DO meter	Annual	MCL
Water	Nitrogen	Grab	SWMM 4500	Annual	MCL
Water	Phosphorus	Grab	EPA 365.4	Annual	MCL
Water	Odor/ color	Grab	Visual	Annual	MCL
Water	suspended/ floating matter	Grab	EPA 160.2	Annual	MCL
Sediment	Bed load weight/grade	Grab	ASZM 422	Annual	N/A
Sediment	Suspended load weight/grade	Grab	ASZM 422	Annual	N/A
Water	Discharge	Gauge	N/A	Continuous	N/A
Topography	DTM	Aerial photography	N/A	Annual	National Mapping Standards
Flooding	HEC-2 HEC-6	N/A	N/A	Every 5 years	N/A
Riparian vegetation	Survey	Ground & aerial reconnaissance	N/A	Every 5 years	N/A

L3

Organization: City of Antioch

Name of Program: Regulatory Compliance

Contact Person(s):	Jon M. Billeci	Lori Sarti
	Treatment Plant Superintendent	Water Quality Analyst
	Post Office Box 5007	Post Office Box 5007
	Antioch, CA 94531-5007	Antioch, CA 94531-5007
	(925) 779-7028	(925) 779-7024

Purpose of Program: To comply with regulations. This water is used as a raw water supply for a municipal water treatment plant.

Year monitoring program began: 1900

Is the data available to the public? Yes

How data is available:

- a. Bulletin board:
- b. Publication: Yearly Water Quality Report, bill stuffers
- c. Transferable storage media:
- d. Internet: City web—<http://www.ci.antioch.ca.us>
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other: By telephone

L3

City of Antioch Regulatory Compliance

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	All regulated organic, inorganic, VOC, radioactivity	Grab	Standard Methods: 502.2, 504, 505, 508, 507, 515.1, 524, 525, 531.1, 632, 547, 548, 1613, series 200	Semi-annually	Drinking water standard

L4

Organization: City of Lodi

Name of Program: National Pollution Discharge Elimination System—Permit Requirements

Contact Person(s): Michael Schafer
City of Lodi
1331 South Ham Lane
Lodi, CA 95242
(209) 333-6749

Del Kerlin
City of Lodi
1331 South Ham Lane
Lodi, CA 95242
(209) 333-6749

Purpose of Program: To meet requirements of NPDES permit for the White Slough Water Pollution Control Facility.

Year monitoring program began: 1977

Is the data available to the public? Yes

How data is available:

- a. Bulletin board:
- b. Publication:
- c. Transferable storage media:
- d. Internet:
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other: Log sheets

L4

City of Lodi

National Pollution Discharge Elimination System—Permit Requirements

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Dissolved oxygen	grab	Winkler titration	2x/week	NPDES permit
Water	pH	grab	Electrometric	2x/week	NPDES permit
Water	Temperature	grab	Thermometer	2x/week	NPDES permit
Water	Turbidity	grab	Nephelometric	2x/week	NPDES permit

L5

Organization: City of Redding

Name of Program: Local Limits Program

Contact Person(s): Marcia Ames	Richard Elliott
City of Redding-Industrial Waste	City of Redding-Industrial Waste
760 Parkview Avenue	760 Parkview Avenue
Redding, CA 96001	Redding, CA 96001
(530) 224-6049	(530) 224-6050
mames@ei.redding.ca.us	
Fax: (530) 224-6052	

Purpose of Program: To establish technically based local limits for metals from industries which discharge to two City of Redding POTWs. This monitoring would not show up in monthly NPDES reports. Sampling includes wastewater from domestic, commercial, and industrial sources; mass balance at the WWTP influent; plant and process removal efficiencies; and background river sampling near the WWTP outfalls. The project is supposed to be updated every three years. The river was sampled at four locations in 1992-1993 on 11-13 different days between December and July, then quarterly through January 1995.

Sampling resumed in January 1998 and will continue monthly through December 1998. The river sampling point was moved to Caldwell Park and another added downstream of Shasta Dam. Sampling at these two points employs EPA 1669 ultra clean techniques.

Year monitoring program began: 1992

Is the data available to the public? Yes

How data is available:

- a. Bulletin board:
- b. Publication: Yes
- c. Transferable storage media: Floppy disk from lab
- d. Internet:
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other:

L5

City of Redding Local Limits Program

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Metals	Grab	ICP;GFAA: Cd, Cu, As	Daily (2 wks) quarterly	Fresh water fish toxicity
Water	Hardness	Grab	EPA 130.2	Daily (2 wks) quarterly	Fresh water fish toxicity
Water	Metals, hardness	Grab	ICP/MS (EPA 1638)	Monthly through 1998, then bimonthly	Fresh water fish toxicity
Water	Mercury	Grab	CVAFS (EPA 1631)	Monthly through 1998, then bimonthly	Human health criteria

L5

Organization: City of Redding

Name of Program: *Giardia/Cryptosporidium* Study

Contact Person(s): Mike Robertson
City of Redding-Water Division
760 Parkview Avenue
Redding, CA 96001
(530) 225-4475

Marcia Ames
City of Redding-Industrial Waste
760 Parkview Avenue
Redding, CA 96001
(530) 224-6049
mames@ei.redding.ca.us

Purpose of Program: To study *Giardia/Cryptosporidium* in source water (Sacramento River downstream of Keswick and Whiskeytown Lake water in the Rock Creek Diversion Line); also, to monitor various constituents (i.e., alkalinity, Ca, pH, TOC, NTU, total hardness, heavy metals—cadmium, chromium, copper, lead, zinc, silver, iron, manganese) in source waters and haloacetic acids and THMs in distribution system. This study was done on groundwater as well.

Year monitoring program began: October 1994–February 1996

Is the data available to the public? Yes

How data is available:

- a. Bulletin board:
- b. Publication: Raw data only
- c. Transferable storage media:
- d. Internet:
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other:

L5

City of Redding

Giardia/Cryptosporidium Study

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Alkalinity	Grab	Standard Methods: 2320	Monthly	None
Water	pH	Grab	4500-H+	Monthly	None
Water	Calcium	Grab	200.7	Monthly	None
Water	Turbidity	Grab	2130	Monthly	None
Water	Hardness	Grab	2340	Monthly	None
Water	Total organic carbon	Grab	5310	Monthly	None
Water	<i>Giardia</i> cyst	Grab	USEPA/ICR	Bimonthly	None
Water	<i>Cryptosporidium</i> oocyst	Grab	SM97111B USEPA/ICR	Bimonthly	None
Water	Metals	Grab	Flame/GFAA	Monthly	None

L6

Organization: City of Sacramento

Name of Program: Sacramento National Pollution Discharge Elimination System—Stormwater Monitoring Program

Contact Person(s): Larry Nash
City of Sacramento
5770 Freeport Blvd., Suite 100
Sacramento, CA 95822
(916) 433-4015

Elissa Callman
City of Sacramento
5770 Freeport Blvd., Suite 100
Sacramento, CA 95822
(916) 433-6635

Purpose of Program: To conduct NPDES monitoring.

Year monitoring program began: 1990

Is the data available to the public? Yes

How data is available:

- a. Bulletin board:
- b. Publication: Yes
- c. Transferable storage media:
- d. Internet:
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other:

L6

City of Sacramento

Sacramento National Pollution Discharge Elimination System—Stormwater Monitoring Program

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Total suspended solids		Various	Monthly	NPDES stormwater monitoring
	Total dissolved solids				
	Hardness				
	Biochemical oxygen demand				
	Ammonia				
	Nitrate as NO ₃				
	Nitrite as N				
	Phosphorus				
	Total organic carbon				
	Dissolved organic carbon				
	Cyanide				
	Arsenic, total recoverable				
	Arsenic, dissolved				
	Cadmium, total recoverable				
	Cadmium, dissolved				
	Chromium, total recoverable				
	Chromium, dissolved				
	Copper, total recoverable				
	Copper, dissolved				
	Iron, total recoverable				
	Iron, dissolved				
	Lead, total recoverable				
	Lead, dissolved				
	Zinc, total recoverable				
	Zinc, dissolved				
	Total coliform				
	Fecal coliform				
	Fecal <i>streptococcus</i>				
	Various organics				
	Organophosphate pesticides				

L6

Organization: City of Sacramento

Name of Program: Combined Wastewater Treatment Plant

Contact Person(s):	Paul Sayegh	Rick Batha
	City of Sacramento	City of Sacramento
	1391 35th Avenue	5770 Freeport Blvd., Suite 100
	Sacramento, CA 95822	Sacramento, CA 95822
	(916) 264-5674	(916) 433-6625

Purpose of Program: To monitor pursuant to NPDES (permit No. CA 0079111) and evaluate impacts to Sacramento River due to wet-weather discharges from the combined sewer. Five-year term.

Year monitoring program began: 1985

Is the data available to the public? Yes

How data is available:

- a. Bulletin board:
- b. Publication: NPDES monitoring reports are available
- c. Transferable storage media:
- d. Internet:
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other:

L6

City of Sacramento Combined Wastewater Treatment Plant

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Temperature	Grab		During discharges*	Increase 5°F
Water	pH	Grab			6.5–8.5, increase 0.5
Water	DO	Grab			5.0mg/L
Water	Turbidity	Grab			Increase 10% of background

*Historically, discharges occur approximately 13 times per year since the 1990–91 wet-weather season.

L7

Organization: City of Sacramento

Name of Program: Raw Water Source Monitoring

Contact Person(s): Ron Myers
City of Sacramento
7501 College Town Drive
Sacramento, CA 95826
(916) 382-3737

Purpose of Program: To monitor source water for drinking water production.

Year monitoring program began: 1926, 1964

Is the data available to the public? Yes

How data is available:

- a. Bulletin board:
- b. Publication: Yes
- c. Transferable storage media: Spreadsheet files
- d. Internet:
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other: Hard copy

L7

City of Sacramento Raw Water Source Monitoring

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Turbidity	Grab	EPA 180.1	3x Day	None
	pH	Grab	EPA 150.1	3x Day	None
	Temperature	Grab	SM 2550 B	3x Day	None
	Alkalinity	Grab	SM 2320 B	3x Day	None
	Calcium	Composite	EPA 200.7	1x Month	None
	Magnesium	Composite	SM 3111 B	1x Month	None
	Iron	Composite	SM 3500-Fe D	1x Month	None
	Sodium	Composite	SM 3111 B	1x Month	None
	Chlorides	Composite	EPA 300.0	1x Month	None
	Sulfates	Composite	EPA 300.0	1x Month	None
	Fluoride	Composite	EPA 300.0	1x Month	None
	TDS	Composite	SM 2540 C	1x Month	None
	Conductivity	Composite	SM 2510 B	1x Month	None
	Arsenic	Composite	SM 3114 B	1x Month	None
	Barium	Composite	SM 3113 B	1x Month	None
	Cadmium	Composite	SM 3113 B	1x Month	None
	Chromium	Composite	SM 3113 B	1x Month	None
	Copper	Composite	SM 3111 B	1x Month	None
	Lead	Composite	SM 3113 B	1x Month	None
	Manganese	Composite	SM 3111 B	1x Month	None
	Mercury	Composite	SM 3112 B	1x Month	None
	Selenium	Composite	SM 3114 B	1x Month	None
	Silver	Composite	SM 3113 B	1x Month	None
	Zinc	Composite	SM 3111 B	1x Month	None
	Total coliform	Grab	SM 9221 B	1x Week	None
	Molinate, bolero	Grab	EPA 507	Project specific	Title 22
	TOC	Grab	EPA 415.1	1x Month	None
	VOC	Grab	EPA 502.2	1x Two Years	Title 22
	Nitrate, nitrite	Grab	EPA 300.0	1x One Year	None
	Antimony	Grab	SM 3113 B	1x One Year	None
	Thallium	Grab	SM 3113 B	1x One Year	None
	Beryllium	Grab	SM 3113 B	1x One Year	None
	<i>Giardia</i>	Grab	EPA ICR	1x Two Months	None
	<i>Cryptosporidium</i>	Grab	EPA ICR	1x Two Months	None

L8

Organization: City of Stockton

Name of Program: National Pollution Discharge Elimination System—Permit Monitoring

Contact Person(s): Larry Huber
City of Stockton — Municipal Utilities
2500 Navy Drive
Stockton, CA 95206
(209) 937-8786

Purpose of Program: To comply with NPDES permit monitoring requirements.

Year monitoring program began: 1994

Is the data available to the public? Yes

How data is available:

- a. Bulletin board:
- b. Publication: Monthly DSMR reports (EPA and RWQCB)
- c. Transferable storage media:
- d. Internet:
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other: Direct requests from data sheets

L8

City of Stockton

National Pollution Discharge Elimination System—Permit Monitoring

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Dissolved oxygen	Field (mid-depth)	SM4500-OG	Weekly, June - Nov Monthly, Dec - May	
Water	Temperature	Grab		Weekly, June - Nov Monthly, Dec - May	
Water	pH	Grab	SM4500-H+B	Weekly, June - Nov Monthly, Dec - May	
Water	Turbidity	Grab	SM2130B	Weekly, June - Nov Monthly, Dec - May	
Water	Electrical conductivity	Grab	SM2510B	Weekly, June - Nov Monthly, Dec - May	
Water	Ammonia	Grab	SM4500-NH3 B/E	Weekly, June - Nov Monthly, Dec - May	
Water	Hardness	Grab	SM2340C	Monthly	
Water	Alkalinity	Grab	SM2320B	Monthly	

L8

Organization: City of Stockton—Municipal Utilities Department

Name of Program: Ambient Water Quality Monitoring Program

Contact Person(s): Larry Huber
City of Stockton — Municipal Utilities
2500 Navy Drive
Stockton, CA 95206
(209) 937-8786

Purpose of Program: To determine compliance with Inland Surface Water Plan.

Year monitoring program began: 1993

Is the data available to the public? Yes

How data is available:

- a. Bulletin board:
- b. Publication:
- c. Transferable storage media:
- d. Internet:
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other: Direct request for specific data sheets

L8

City of Stockton—Municipal Utilities Department Ambient Water Quality Monitoring Program

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Dissolved oxygen	Field (mid-depth)	SM 4500 0G	Weekly, June - Nov Monthly, Dec - May	
Water	Temperature	Grab		Weekly, June - Nov Monthly, Dec - May	
Water	pH	Grab	SM 4500-H+B	Weekly, June - Nov Monthly, Dec - May	
Water	Turbidity	Grab	SM 2310 B	Weekly, June - Nov Monthly, Dec - May	
Water	Electrical conductivity	Grab	SM 2510 B	Weekly, June - Nov Monthly, Dec - May	
Water	Ammonia	Grab	SM 4500-NH 3	Weekly, June - Nov Monthly, Dec - May	
Water	Hardness	Grab	SM 2340 C	Monthly	
Water	Alkalinity	Grab	SM 2320 B	Monthly	

L9

Organization: City of Tracy

Name of Program: Receiving Stream Monitoring

Contact Person(s): Frank Motzkus
City of Tracy
3900 Holly Drive
Tracy, CA 95376
(209) 831-4487
frankm@ci.tracy.ca.us

Steve Bayley
City of Tracy
520 North Tracy Blvd.
Tracy, CA 95376
(209) 831-4434
steveb@ci.tracy.ca.us

Purpose of Program: To meet requirements of National Pollution Discharge Elimination System permit.

Year monitoring program began: 1986

Is the data available to the public? Yes

How data is available:

a. Bulletin board:

b. Publication:

c. Transferable storage media: When requested

d. Internet:

e. Spatial mapping (e.g., GIS, CAD):

f. Other: Written request order—Freedom of Information Act; oral requests also taken

L9

City of Tracy

Receiving Stream Monitoring

Medium	Parameter	Sampling Method	Analytical Method	Frequency*	Compliance Standard
Water	DO	Grab	SM4500-0g	Weekly	NPDES
Water	pH	Grab	SM4500-HB	Weekly	NPDES
Water	Turbidity	Grab	SM2130B	Weekly	NPDES
Water	Ammonia	Grab	SM4500-NH3-F	Monthly	NPDES
Water	Un-ionized ammonia	Grab		Weekly	NPDES

*Sampling frequency increases to twice per week when Grant Line Canal Barrier is in place and during first calendar year after barrier project is installed on Old River.

Note: City of Tracy Effluent Monitoring—Standard Minerals on Annual Basis (NPDES) (Grab samples)

Chloride	Sodium
Sulfate	Hardness
Nitrate	Silica
Alkalinity	Boron
Calcium	Iron
Magnesium	Phosphate
Potassium	

Three Species Chronic Toxicity Monitoring (once per calendar quarter)

Effluent flow-through Bioassay (continuous)

L9

Organization: City of Tracy

Name of Program: Delta Mendota Canal

Contact Person(s): Daniel E. Wengrir
City of Tracy
6649 South Tracy Blvd.
Tracy, CA 95376
(209) 831-4495

Purpose of Program: To comply with standards for drinking water.

Year monitoring program began: 1990

Is the data available to the public? Yes

How data is available:

- a. Bulletin board:
- b. Publication: Annual Water Quality Report
- c. Transferable storage media:
- d. Internet:
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other:

L9

City of Tracy
Delta Mendota Canal

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Temperature Turbidity EC DO pH Hardness Metals (various) VOCs Nutrients Asbestos TOC THMFP Haloacetic acids Odor Corrosivity TDS Gross alpha Uranium Bromacil Diuron Soluble organic chemicals	Grab	Various	Monthly	Drinking water

L10

Organization: City of Vacaville, City of Fairfield (jointly owned plant)

Name of Program: Safe Drinking Water Act

Contact Person(s): Ken Briltz
North Bay Regional Water
Treatment Plant
5110 Peabody Road
Vacaville, CA 95687-9371
(707) 428-7680
nbrwtp@mail.castles.com

Niles Fleege
North Bay Regional Water
Treatment Plant
5110 Peabody Road
Vacaville, CA 95687-9371

Purpose of Program: To comply with the federal and State regulations as mandated by SDWA. Sampling takes place the first month of each quarter of the calendar year. The cities of Benicia, American Canyon, Fairfield, Napa, Vacaville, and Vallejo have established a user's agreement to share the data collected at Barker Slough.

Year monitoring program began: 1991

Is the data available to the public? Yes

How data is available:

- a. Bulletin board:
- b. Publication:
- c. Transferable storage media:
- d. Internet: Yes
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other: Hard copies

L10

City of Vacaville, City of Fairfield (jointly owned plant)
Safe Drinking Water Act

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	VOCs	Grab	Standard Methods: 524.2 GC/MS	Quarterly	Drinking water
Water	SOCs	Grab	525.2 GC/MS	Biannually	Drinking water
Water	Pesticides	Grab	508	Biannually	Drinking water
Water	Herbicides	Grab	515.1	Biannually	Drinking water
Water	Carbamates	Grab	531.1	Biannually	Drinking water
Water	Diquat, paraquat	Grab	549.1	Biannually	Drinking water
Water	Endothall	Grab	548.1	Biannually	Drinking water
Water	Glyphosate	Grab	547	Biannually	Drinking water
Water	Gen. mineral physical & organic	Grab	*	Quarterly	Drinking water
Water	Gross alpha & beta	Composite	900	Annually	Drinking water

* 1. A list of the regulated and unregulated compounds is included. 2. Several methods are used for the general mineral, physical, and inorganics. All metals are analyzed with an atomic absorption unit.

L11

Organization: City of Vallejo

Name of Program: City of Vallejo—Water Quality

Contact Person(s): Anne Rice
City of Vallejo
Post Office Box 3068
Vallejo, CA 94590
(707) 649-3472
annerice@ci.vallejo.ca.us

Purpose of Program: To perform Title 22 and source water monitoring and process control.

Year monitoring program began: Ongoing per Department of Health Services

Is the data available to the public? Yes

How data is available:

- a. Bulletin board:
- b. Publication: Annual water quality report
- c. Transferable storage media:
- d. Internet:
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other:

L11

City of Vallejo

City of Vallejo—Water Quality

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Alkalinity	Grab	Various	Various	Title 22
	Total hardness				
	Ca hardness				
	Calcium				
	Mg hardness				
	Magnesium				
	pH				
	Fluoride				
	Color				
	Taste and odor				
	Turbidity				
	Conductivity				
	TDS				
	Temperature				
	Dissolved oxygen				
	Total coliform				
	Fecal coliform				
	HPC				
	NPOC				
	Nitrogen forms				
	Al, Fe, Mn				
	Bromide				
	Title 22 metals				
	Na, K, SO ₄ , PO ₄				
	Solids, total and susp.				
	MBAS				
	Cyanide				

Note: VOCs, SOC_s, radionuclides, and asbestos are monitored through a cooperative agreement with other North Bay Aqueduct users at Barker Slough. City of Vallejo no longer monitors Cache Slough.

L12

Organization: Contra Costa Water District

Name of Program: Source Water Monitoring

Contact Person(s): Larry J. McCollum
Contra Costa Water District
2015 Bates Avenue
Concord, CA 94520
(510) 688-8127
74757.3164@compuserve.com

Purpose of Program: To monitor source water for treated water supply.

Year monitoring program began: Late 1960s

Is the data available to the public? By request

How data is available:

- a. Bulletin board:
- b. Publication:
- c. Transferable storage media: Floppy disk
- d. Internet:
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other:

L12

Contra Costa Water District
Source Water Monitoring

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Field temperature	Grab	Various, as specified in title 22	Daily, Monthly, Quarterly	Title 22
	Field and laboratory pH				
	Specific conductance				
	Total dissolved solids				
	Sodium				
	Calcium				
	Magnesium				
	Potassium				
	Silica dioxide				
	Bromide				
	Chloride				
	Fluoride				
	Ammonia				
	Nitrite (N)				
	Nitrate (NO ₃)				
	Sulfate				
	Ortho phosphate				
	Total alkalinity				
	Total hardness				
	Total organic carbon				
	Glyphosate				
	Total coliform				
	Noncoliform				
	Heterotrophic plate count				
	Fecal coliform				
	Fecal streptococcus				
	Total phytoplankton				
	Total green algae				
	Total bluegreen algae				
	Total diatoms				
	Dominant organism				
	Taste and odor producer				
	Total anions				
	Total cations				
	Title 22 metals				
	TDS				
	Alkalinity				
	Radiological				
	Pesticides				
	PCBs				

L13

Organization: Dry Creek Conservancy

Name of Program: Dry Creek Conservation Rapid Bioassessment

Contact Person(s): Gregory Bates
Dry Creek Conservancy
Post Office Box 1311
Roseville, CA 95678-8311
(916) 771-2013

Ernest Riley
Sierra College–Biology Dept.
5000 Rocklin Road
Rocklin, CA 95677

Purpose of Program: To generate valid data to establish baseline conditions and monitor trends over time for all the streams of the watershed. The program is funded through a 319 grant sponsored by Placer County. Citizen volunteers were trained in April 1997. The group of 12–14 developed procedures through the summer and began formal data gathering in fall 1997.

Year monitoring program began: 1997

Is the data available to the public? Yes

How data is available:

- a. **Bulletin board:**
- b. **Publication:** To be developed
- c. **Transferable storage media:**
- d. **Internet:**
- e. **Spatial mapping (e.g., GIS, CAD):** CAL watershed inventory project
- f. **Other:** Central Valley Regional Water Quality Control Board, California Department of Fish and Game

L13

Dry Creek Conservancy
 Dry Creek Conservation Rapid Bioassessment

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
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No data available

L14

Organization: Goose Lake Fisheries Working Group

Name of Program: Goose Lake Fisheries Working Group

Contact Person(s): Don Lancaster
U.C. Coop. Extension
202 West 4th Street
Alturas, CA 96101
(530) 233-6400

Dennis Heiman
CVRWQCB—Redding
415 Knollcrest Drive
Redding, CA 96002
(530) 224-4851

Purpose of Program: To monitor water temperature on Willow Creek, Lassen Creek, and in Goose Lake and to collect pH, elemental, and biological data with respect to water quality and native fishes in the Goose Lake Basin.

Year monitoring program began: 1993

Is the data available to the public? Yes

How data is available:

- a. Bulletin board:
- b. Publication: Contact Dennis Heiman, CVRWQCB, Redding, May 1997
- c. Transferable storage media:
- d. Internet:
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other:

L14

Goose Lake Fisheries Working Group

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Temperature	Hobo. temp. and Hydro lab	Constant recorder	June–August	None
	pH Dissolved oxygen Standard minerals			2x per year (summer season)	

L15

Organization: Metropolitan Water District

Name of Program: Source Water Simulated Distribution System

Contact Person(s): Bart Koch
Metropolitan Water District
200 Moreno Avenue
La Verne, CA 91750
(909) 392-5294
bkoch@mwd.dst.ca.us

Purpose of Program: To study how water quality changes affect disinfection by-product levels.

Year monitoring program began: 1991

Is the data available to the public? Not directly

How data is available:

- a. Bulletin board:
- b. Publication: Internal reports
- c. Transferable storage media: Microsoft Excel
- d. Internet:
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other:

L15

Metropolitan Water District Source Water Simulated Distribution System

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	SDS-trihalomethanes	Grab	SM 2710C EPA 551	Quarterly	Drinking water
Water	SDS-halomethones haloacetonitriles	Grab	SM 2710C EPA 551	Quarterly	Drinking water
Water	SDS-haloacetic acids	Grab	SM 2710C SM 6251	Quarterly	Drinking water
Water	TOC	Grab	SM 5310C	Quarterly	Drinking water
Water	Ultraviolet absorbency	Grab	SM 5910B	Quarterly	Drinking water
Water	Bromide/ chloride	Grab	EPA 300.0	Quarterly	Drinking water
Water	Ammonia	Grab	SM 4500-NH3D	Quarterly	Drinking water
Water	Alkalinity	Grab	SM 2320B	Quarterly	Drinking water
Water	Hardness	Grab	SM 2340C	Quarterly	Drinking water
Water	Electrical conductivity	Grab	SM 2510B	Quarterly	Drinking water
Water	Turbidity	Grab	SM 2510B	Quarterly	Drinking water
Water	TDS	Grab	SM 2540C	Quarterly	Drinking water
Water	pH	Grab	SM 4500 H+B	Quarterly	Drinking water

L16

Organization: Sacramento Regional County Sanitation District

Name of Program: Sacramento Coordinated Monitoring Program

Contact Person(s): Rosemary Clark
SRCSD
8521 Laguna Station Road
Elk Grove, CA 95758
(916) 875-9133

Purpose of Program: To implement a long-term Ambient Water Quality Monitoring Program to characterize ambient levels of pollutants of concern in the Sacramento and American Rivers.

Year monitoring program began: December 1992

Is the data available to the public? Yes

How data is available:

- a. **Bulletin board:**
- b. **Publication:** Annual data reports
- c. **Transferable storage media:** Upon request
- d. **Internet:**
- e. **Spatial mapping (e.g., GIS, CAD):**
- f. **Other:** Upon request, as needed

L16

Sacramento Regional County Sanitation District Sacramento Coordinated Monitoring Program

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Antimony	* Based on EPA 1669 sampling methods	Discontinued	Monthly	CTR, EPA, Drinking Water, Basin Plan, and others
	Arsenic		EPA 1638		
	Cadmium		EPA 1638		
	Chromium	* Samples are cross-sectional composites at all locations, except at Nimbus where samples are collected as near shore grabs	EPA 1638		
	Copper		EPA 1638		
	Cyanide		Discontinued		
	Lead		EPA 1638		
	Mercury		EPA 1631		
	Nickel		EPA 1638		
	Selenium		Discontinued		
	Silver		Discontinued		
	Zinc		EPA 1638		
	Chlorpyrifos		ELISA		
	Diazinon		ELISA		
	Total coliforms		SM 9000		
	Fecal coliforms		SM 9000		
	Fecal strep		SM 9000		
	TOC		EPA 415.2		
	DOC		EPA 415.2		
	TSS		EPA 160.2		
	Hardness		EPA 130.2		
	pH		Field measured		
	EC		Field measured		
	Temperature		Field measured		
	DO		Field measured		

L17

Organization: Sacramento Regional County Sanitation District

Name of Program: Pretreatment Program Priority Pollutants: P(4)

Contact Person(s): Glen Del Sarto
SRCSD
8521 Laguna Station Road
Elk Grove, CA 95758
(916) 875-6554

Purpose of Program: To assess as accurately as possible the loading contribution for metals and toxic organics to the Sacramento River from the Regional Treatment Plant; to determine the removal efficiency, source, and fate of pollutants entering the Regional Plant; and to determine background organics in the Sacramento River.

Year monitoring program began: 1983

Is the data available to the public? Yes

How data is available:

- a. **Bulletin board:**
- b. **Publication:** Annual pretreatment reports, about March of each year
- c. **Transferable storage media:** Microsoft Excel
- d. **Internet:** Upon request
- e. **Spatial mapping (e.g., GIS, CAD):**
- f. **Other:** Upon request

L17

Sacramento Regional County Sanitation District
Pretreatment Program Priority Pollutants: P(4)

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Sb, As, Cd Cr, Cu, Pb Ni, Se, Ag, Hg, Tl, Zn, Mo,Be, TDS Cyanide	Grab and Composite	MDLs, EPA 601, 602, 610, 625, O/P Pesticides	Various, typically 3x per year for 7 consecutive days	

L18

Organization: San Francisco Estuary Institute

Name of Program: San Francisco Estuary Regional Monitoring Program for Trace Substances

Contact Person(s): Dr. Bruce Thompson
San Francisco Estuary Institute
(510) 231-9539, extension 613

Purpose of Program: To obtain baseline and long-term trend data describing the concentrations of toxic trace elements, organic contaminants in the water and sediment, and possible effects in the San Francisco Estuary; determine if water quality and sediment quality in the Estuary are meeting regulatory criteria set up to protect the health of the ecosystem; and generate data that are compatible with data being developed in other ongoing studies and, by implication, relate other relevant information to that generated under the program for regional assessments.

Year monitoring program began: 1992

Is the data available to the public? Yes

How data is available:

- a. **Bulletin board:**
- b. **Publication:** Annual reports summarize all RMP activities. Contact SFEI.
- c. **Transferable storage media:**
- d. **Internet:** www.sfei.org (Data can be selectively queried and downloaded.)
- e. **Spatial mapping (e.g., GIS, CAD):**
- f. **Other:**

L18

San Francisco Estuary Institute
San Francisco Estuary Regional Monitoring Program for Trace Substances

Medium	Parameter	Sampling Method*	Analytical Method	Frequency	Compliance Standard
Water	Conventional parameters Toxicity Trace elements PCBs Organochlorine pesticides PAHs			Water samples are taken three times/year	
Sediment	Same as water			Twice per year	
Bivalve tissue	Trace elements PCBs Organochlorine pesticides PAHs Condition			Twice per year	
Fish	Hg PCBs Organochlorine pesticides Dioxins			Once every three years	
Benthos	Community composition			Twice per year	

*Methods cannot be described in the space available.

L19

Organization: Sand and Salt Creek Watershed Project

Name of Program: Sand and Salt Creek Watershed Project Monitoring Program

Contact Person(s): Roney Gutierrez
Project Manager
100 Sunrise Blvd., Suite B
Colusa, CA 95993
(916) 458-2931

Purpose of Program: To serve as a pilot project to private landowners on how to address non-point source pollution issues associated with the Clean Water Act. The project consists of selected sites which implement effective management practices to reduce surface runoff, Diazinon residue, and sedimentation into the Colusa Basin Drain and Sacramento River.

Year monitoring program began: 1997

Is the data available to the public? Yes

How data is available:

- a. Bulletin board: Yes
- b. Publication: Yes
- c. Transferable storage media:
- d. Internet:
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other:

L19

Sand and Salt Creek Watershed Project Sand and Salt Creek Watershed Project Monitoring Program

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Organo-phosphates Diazinon	Grab	Enviroguard Spectroscopy	Quarterly	Drinking water std.
Sediment	Silt	Rod readings of field sediment	Reading of measured level of sediment in the field	Monthly	USLE - soil loss tolerance
Soil surface and cover crops	Water infiltration	Rain simulator in field situations	Field measurement of field runoff	Quarterly	USLE management factor

L20

Organization: Sacramento River Watershed Program

Name of Program: Sacramento River Watershed Program—Year One Monitoring Program

Contact Person(s): Jerry Troyan	Tom Grovhoug
Sacramento Regional County	Larry Walker Associates
Sanitation District	509 4th Street
8521 Laguna Station Rd.	Davis, CA 95616
Elk Grove, CA 95758	(530) 753-6400
(916) 875-9144	tomg@lwadavis.com
troyanj@pwa.po.sacramento.ca.us	

Purpose of Program: To develop, in coordination with other subcommittees and the larger stakeholder group, a cost-efficient and well coordinated long-term monitoring program within the watershed. Program staff will identify the causes, effects, and extent of constituents of concern that affect the beneficial uses of water and measure the progress as control strategies are implemented.

Year monitoring program began: 1997

Is the data available to the public? Yes

How data is available:

- a. **Bulletin board:**
- b. **Publication:** Annual data reports
- c. **Transferable storage media:** Not determined
- d. **Internet:** Yes, but data not yet available
- e. **Spatial mapping (e.g., GIS, CAD):**
- f. **Other:** By request, as needed

Sacramento River Watershed Program
 Sacramento River Watershed Program—Year One Monitoring Program

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Metals:	Grab (water)	EPA,	Monthly	Drinking water,
Tissue	Hg, Cu, Cd,	Cross-sectional	Standard	Bimonthly	CTR, EPA,
Biota	Zn, As, Pb, Cr	Composite (water)	Methods,	Semiannual	Basin Plans
Sediment	TSS	Various (tissue)	and others	Annual	
	Hardness	Kick-net (biota)			
	Turbidity				
	Temperature				
	TOC				
	DOC				
	Dissolved oxygen				
	EC				
	Pathogens:				
	<i>Giardia</i>				
	<i>Cryptosporidium</i>				
	Total and fecal				
	coliform				
	Toxicity:				
	<i>Ceriodaphnia</i>				
	<i>Pimephales</i>				
	<i>Hyaella</i>				
	Nutrients:				
	Nitrite				
	Nitrate				
	Ammonia				
	Organic nitrogen				
	Orthophosphate				
	Total phosphates				
	Minerals:				
	Alkalinity				
	Chloride				
	Iron				
	Manganese				
	Calcium				
	Magnesium				
	Silica				
	Sulfate				
	Sodium				
	Potassium				

Chapter 5

Unmapped Programs

Department of Pesticide	144
Regulation	

Organization: Department of Pesticide Regulation

Name of Program: San Joaquin River Watershed Dormant Spray Monitoring Program
(San Joaquin River near Vernalis and Orestimba Creek—not mapped)

Contact Person(s):	Don Weaver	Kevin Bennett
	Dept. of Pesticide Regulation	Dept. of Pesticide Regulation
	1020 N Street, Room 161	1020 N Street, Room 161
	Sacramento, CA 95814	Sacramento, CA 95814
	(916) 324-4100	(916)324-4200
	dweaver@cdpr.ca.gov	kbennett@cdpr.ca.gov

Purpose of Program: To monitor the occurrence of toxicity, both acute and chronic, chlorpyrifos, diazinon, and methidathion levels in the San Joaquin River watershed during the dormant spray season.

Year monitoring program began: 1997

Is the data available to the public? Yes

How data is available:

a. **Bulletin board:**

b. **Publication:** *Occurrence of Aquatic Toxicity and Dormant-Spray Pesticide Detections in the San Joaquin River Watershed, Winter 1996–97*

c. **Transferable storage media:**

d. **Internet:**

e. **Spatial mapping (e.g., GIS, CAD):**

f. **Other:**

Department of Pesticide Regulation
 San Joaquin River Watershed Dormant Spray Monitoring Program
 (San Joaquin River near Vernalis and Orestimba Creek—not mapped)

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Water	Pesticides	Depth int. grab	CDFA (GC, HPLC)	3x/ week for 12 weeks	WQ criteria protect aqu. wildlife
Water	Chronic toxicity	Depth int. grab	USEPA Chronic fresh	1x/ week for 12 weeks	Basin Plan—narrative toxicity criteria
Water	Acute toxicity	Depth int. grab	USEPA Acute fresh	2x/ wk for 12 weeks	Basin Plan—narrative toxicity criteria

Organization: Department of Pesticide Regulation

Name of Program: Groundwater Monitoring Program from AB2021, Pesticide Contamination Prevention Act (not mapped)

Contact Person(s): Don Weaver
Dept. of Pesticide Regulation
1020 N Street, Rm. 161
Sacramento, CA 95814
(916) 324-4132
dweaver@cdpr.ca.gov

Mark Pepple
Dept. of Pesticide Regulation
1020 N Street, Rm. 161
Sacramento, CA 95814
(916) 324-4086
mpepple@cdpr.ca.gov

Purpose of Program: To prevent further pesticide pollution of the groundwater aquifers of the state. The PCPA requires the department to take specified actions which combine to form three major processes: (1) establishment of a data base of wells sampled for pesticides; (2) data collection and analysis, identification, and monitoring of potential contaminants; and (3) review of findings of pesticide contamination and imposition of necessary mitigation measures.

Year monitoring program began: 1985

Is the data available to the public? Yes

How data is available:

- a. Bulletin board: Yes
- b. Publication: Yes
- c. Transferable storage media:
- d. Internet:
- e. Spatial mapping (e.g., GIS, CAD):
- f. Other:

Department of Pesticide Regulation
Groundwater Monitoring Program from AB2021, Pesticide Contamination Prevention Act
(not mapped)

Medium	Parameter	Sampling Method	Analytical Method	Frequency	Compliance Standard
Well water	Pesticides (list of pesticides found in yearly well inventory report)	Well sample	Varies by pesticides	Project specific	In-house standard

